



**PREDICTORS AND PREDICTIVE EFFECTS OF ATTITUDINAL
INCONSISTENCY TOWARDS ORGANIZATIONAL CHANGE**

THESIS

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THESIS

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Abstract

Studies have largely portrayed individual resistance as a pervasive, irrational and problematic response to organizational change initiatives. The current study confronts this interpretation with a model of attitudinal inconsistency that provides a more holistic perspective of the individual during times of change. Inconsistency reveals the degree to which the mental evaluations of a change initiative may conflict and produce weak attitudinal foundations to govern behavior. Measuring affective-cognitive consistency, the tests in this study demonstrate that employees may form inconsistent attitudes towards a change initiative. These inconsistent attitudes are comprised of varying shades of resistance and support. As the first of two novels contribution to the literature, inconsistency relates negatively to the perceived quality of management transition techniques such as participation, communication, structured procedure, managerial supportiveness, and supervisor supportiveness. In a second test, consistency also serves a role in the process of attitudinal change. Consistency partially mediates all five of the above predictors of openness to change. Post hoc analysis provides further evidence of the importance of a supportive culture in reducing inconsistency. Taken together, these results should cause some pause in the criticism of resistance. The mental processes behind perceived resistant attitudes and behaviors may display consequential dimensions beyond uniform negativity.

To my wife and children for their support and patience during this process

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Scott T. Drylie

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PREDICTORS AND PREDICTIVE EFFECTS OF ATTITUDINAL INCONSISTENCY TOWARDS ORGANIZATIONAL CHANGE

I. Introduction

Organizations face a business environment today that demands regular, if not constant, self-awareness and attentiveness to practices (Armenakis & Harris, 2009; Cole, Harris, & Bernerth, 2005). Organizational transformation – perhaps once a discrete act in the history of an organization – now represents an existential state, whereby an organization either continues to evolve, or risks inconsequentiality in their respective fields (Isabella, 1990). To a contemporary ear, the adage “Adapt or Die” should sound like a familiar governing principle for organizational practices. The exogenous culprits in this scenario are many. Globalization, competition, technological evolution, as well as social, political and environmental change have all put pressures on organizations to dispose of antiquated business practices (Beer & Walton, 1987; Kickul, Lester, & Finkl, 2002; Kotter, 2006).

And yet many organizations find the ability to change elusive. Studies repeatedly draw the conclusion that true success is uncommon (e.g., By, 2005; Gilmore, Schea, & Unseem., 1997). A recent global survey reveals that only one-third of organizational change efforts succeeded in the eyes of their leaders (Meaney & Pung, 2008). Transformation may account for one of the most challenging events a corporation can face (Isabella, 1990). Given that transformations frequently fail, the evolution of industry may best be described as a path marked not just by adaption, but by tentative fits and

starts. Such an arduous path of progress has financial implications for organizations, psychological implications for the individuals in its path, and existential implications for all vested parties.

Organizational behavior research has sought to understand why change has proven difficult for organizations. One perspective implicates institutional rigidities, and deficient organizational cultures (e.g., Burke & Litwin, 1992; DiMaggio & Powell, 1983). Another directly implicates the resistance of employees (e.g., Waldersee & Griffiths, 1997; Wanberg & Banas, 2000). This latter emphasis has revealed that facing change triggers highly complex psychological processes leading to uncertain ends. For instance, employees may experience frustration, uncertainty, anxiety, and defensiveness (Bovey and Hede, 2001a; 2001b; Piderit, 2000). To embrace change, employees may have to cope with stress, face personal challenges to their abilities and routines, and tap into requisite mental flexibility (Oreg, 2003). Employees may even have to wrestle with concepts elemental to their being, namely the validity and worth of their own perceptions, beliefs, and values (Armenakis, Harris, & Mossholder, 1993). This body of knowledge suitably frames the complexity of achieving support for institutional change, and provides some answers as to why transformation efforts often fail.

Problem Statement

The study of employee resistance relies significantly on research from the prolific science of social psychology. However, several recent critiques have argued that these psychological excursions have transpired in an eclectic and divergent fashion (e.g., Piderit, 2000; Erwin & Garman, 2009). Additionally, these critiques note that

psychologically-based studies of resistance have not always applied solid or contemporary principles of psychology. These and other studies (e.g., Fisher, 2000; Oreg, 2006) have begun to reference a more refined and comprehensive model from social psychology, namely the *multidimensional attitude*, as a way to synthesize divergent findings and to update the perspective of resistance research. However, empirical applications of a multidimensional form of attitude remain in short supply (e.g., Oreg & Sverdlik, 2011). As such, resistance research continues to perpetuate an impression that would appear incongruent with the field of social psychology. That dubious impression is that employees resist in a wholly negative, irrational manner towards sound corporate objectives (Ford, Ford, & D'Amelio, 2008). A multidimensional perspective of attitude should significantly qualify this pejorative subtext within contemporary resistance research.

In the present study, we apply this encompassing and multidimensional construct of attitude. Specifically, we bring attention to one of its many demonstrated attributes, *inconsistency*. Inconsistency addresses a type of psychological response largely missing, and almost completely untested, in the discussion of resistance: the *conflicted* attitudinal response. Within social psychology, the study of inconsistency has already resolved the “troublesome eddies” of an arbitrarily constrained perception of attitude such as that which still endures in resistance studies (Cacioppo, Gardner, & Bernston, 1997, p. 15). Moreover, inconsistency has served as an example of the capacity of a multidimensional attitude to synthesize and reformulate discrepancies in traditional measures (e.g., Schleicher, Greguras, & Watt, 2004). In these capacities, inconsistency should serve to

unveil the inadequacy of the claim that resistance stems from a fully negative and irrational mental platform.

Research Focus

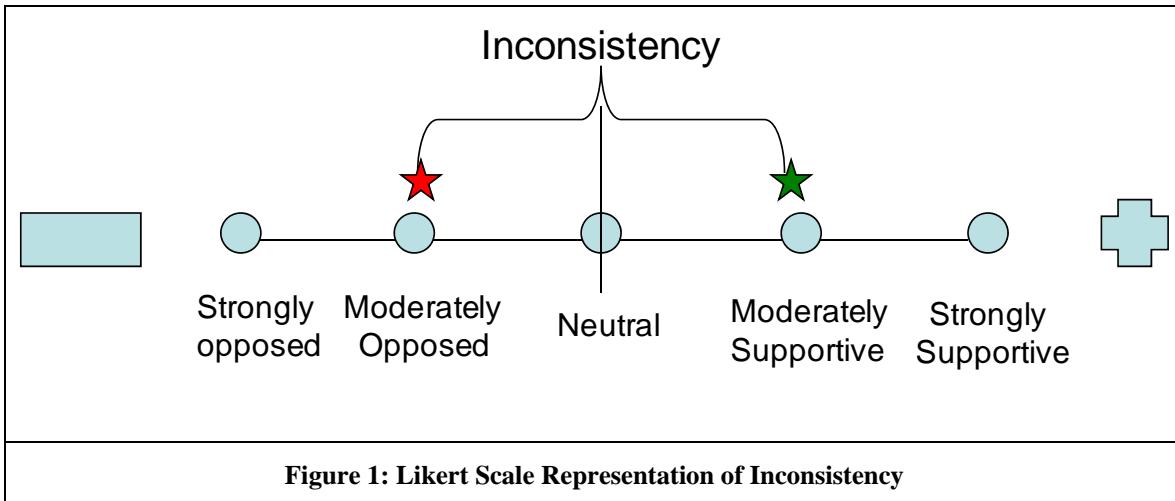
Social psychology defines attitude as the *tendency* or *bias* an individual experiences in evaluating an issue (Eagly & Chaiken, 2007). Attitudes build on the foundation of our values, beliefs, opinions, and experiences; thereafter, attitudes work as a shortcut tool used to process new information quickly, and for making a judgment (Pratkanis & Greenwald, 1997). Attitudes have persisted as an important item of interest because they tend to predict behavior. Individuals do not comfortably act in conflict with their values, beliefs, and opinions that inform their attitudes. Because of the predictive power of attitudes, they have served as perhaps the most prolific construct in social psychology throughout the 20th century (Ajzen, 2001; Cacioppo et al., 1997; Gawronski, 2007). However, despite the wealth of findings within social psychology, resistance research fails to adequately employ attitude. This deficiency is peculiar considering that prominent models recognize that a high level of an *openness to change* (a plausible candidate for an attitude) proves critical in producing “readiness” for change (e.g., Armenakis et al., 1993).

In the details, resistance studies (and, for the large part, all of organizational behavior) have parted ways with social psychology. Organizational behavior studies have generally modeled attitude as fixed and dispositional (e.g. Gerhart, 1987; Straw & Ross, 1985), as well as internally homogenous, that is, measurable simply as either positive or negative (e.g., Wanberg & Banas, 2000). While the fixedness concept has

begun to erode (Davis-Blake & Pfeffer, 1989; Judge, Thoresen, Bono, & Patton, 2001), the assumption of homogeneity remains quite firm despite the fact that psychology has long demonstrated otherwise (e.g. Kaplan, 1975). We ask, therefore, what it would mean to studies of organizational change if resistance was not a single, homogenous, internally consistent disposition. What is lost by overlooking the possibility of coexistent positive and negative attitudinal components? Piderit (2000) suggests that, in failing to consider such a possibility, one may overlook the most common attitudinal reaction to change, the conflicted attitude.

The existence of a conflicted mental state does appear quite plausible in regards to organizational transformation. For instance, a person may feel reluctant to support change based on prior negative experiences, but assess the basic concept of the actual proposal as decent. Or, a person may find the proposal offensive based on principles, but generally respect and sympathize with the managers who must implement it. With these as examples, one can imagine that an overall negative tendency towards transformation may contain within it elements of the positive. Therefore, the objective of studying a “true” mental state may require us to consider the role of these possible underlying conflicts (Rosenberg, 1968, p. 87). Moreover, the objective of obtaining meaningful predictions from attitudes may require it. Wicker (1969) demonstrated in his seminal meta-analysis, for instance, that failing to consider a more detailed definition of attitude robbed attitude of its power to predict behavior beyond the disappointing historical average of a .30 correlation.

The current study responds to Piderit's call to introduce into resistance studies a construct of attitude that permits a consideration of *internal conflict*. Psychology has long studied this. Two attitude constructs, alternatively known as *ambivalence* and *inconsistency*, capture the described phenomenon (Eagly & Chaiken, 1998; Thompson & Zanna, 1995). Both refer to that sense of being torn between two opinions, those mixed feelings which cause mental discomfort until they are resolved. We will specifically investigate the construct of inconsistency. One can visualize the inconsistency phenomenon with the common Likert scale (Figure 1). If an individual answers a 4 on one question, and a 2 on a similar question, traditionally that discrepancy would be ignored, by averaging the scores. That person would appear indistinguishable from a person who responded with all 3s. Or, if sufficient discrepancies occurred across a population, one would interpret such inconsistent results as a test reliability issue (Norman, 1975). Advocates of inconsistency have demonstrated that these measurement discrepancies actually relate to a meaningful mental construct of conflict (e.g. Liberman & Chaiken, 1991; Rosenberg, 1960; Scott, 1968). Therefore, it is these meaningful discrepancies that we aim to insert into an understanding of resistance.



Research Questions

In the present study we engage in three inquiries. First, we ask whether inconsistency occurs toward organizational change. If so, how does it relate to common organizational transformation techniques from management? This is a test of correlation. Second, we ask if inconsistency is meaningful in this context. Does the elimination of inconsistency serve a preliminary step towards persuading an individual? This is a test of mediation. Third, does the presence of inconsistency change attitude's ability to govern behaviors in the context of organizational change? This last question requires a test of moderation (Figure 2). From the perspective of the manager, the answers to all of these questions will help determine if the inconsistent individual is a source of threat to the mission, and what the manager should do, if anything, about it. This work takes the first steps to translate scientific knowledge of inconsistency into practical lessons for managers.

Model and Implications

Within the entire field of organizational behavior, only two empirical publications have directly attacked the assumptions of a uniform concept of attitude. Schleicher et al. (2004) applied the *inconsistency* of *cognition* and *affect* to reconfigure *job satisfaction*. Oreg and Sverdlik (2011) recently applied *ambivalence* between evaluations of the manager and evaluations of the initiative, to better understand our topic of resistance. Innumerable possible conflicts of underlying discrete issues are imaginable, but the current study, in introducing the concept of inconsistency for the topic of resistance, takes an intentionally broad approach, one modeled after the study by Schleicher and colleagues rather than by Oreg and Sverdlik. Namely, we determine the degree to which *inconsistency* occurs for the issue of organizational change between well-evidenced components of attitude, *cognition* and *affect*. This measure is known as the affective-cognitive consistency (ACC) of an attitude (Eagly & Chaiken, 1998).

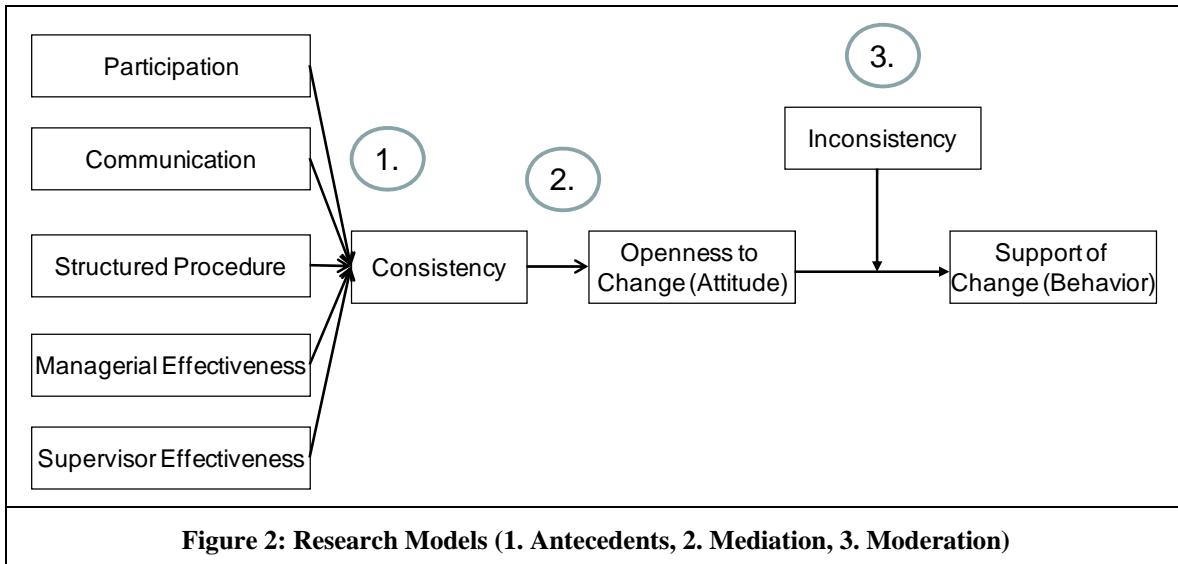
An ACC construct has certain advantages for inclusion in this discussion of resistance. As Rosenberg (1968) noted, conflict in terms of thoughts and feelings is a convenient and parsimonious means to broadly capture numerous dynamics (Rosenberg, 1968). For example, in the case of resistance studies, an individual could have low tolerance for change, feel anxiety about the new responsibilities, and feel skeptical about success (all emotional), and yet also hold positive thoughts about the message and messenger, and rationally conceive it as one's duty to comply (all cognitive). Therefore, an ACC model serves as a convenient starting point to synthesize individual findings already present within resistance research, and which already naturally align themselves

along these recognized categories of information processing. Moreover, ACC is a great ambassador for ushering in the discussion of conflict into resistance studies since it is well-evidenced in inconsistency literature and rests on components that have been studied extensively for decades throughout all of social psychology. ACC casts a wide net and, if significant, should stimulate a more nuanced discussion of the underlying elements capable of conflicting.

Because of the preexisting body of knowledge regarding ACC, employing it here also allows an easy and effective integration of our findings back into the growing body of inconsistency research. This point potentially has great ramifications for the field of inconsistency itself. Inconsistency is still a concept resting on incomplete validation. Inconsistency research currently can demonstrate an effect on behavior (through moderation) but has failed in all efforts to empirically demonstrate what predicts or causes inconsistency – a key criteria for gaining greater validity (Chaiken & Baldwin, 1981). The gravitas of this failing has, unfortunately, been underemphasized by researchers (e.g., Schleicher et al., 2004). We recognize that the context for the present research naturally provides important elements which may allow us to address the weakest parts of inconsistency theory. Therefore, we take this opportunity to not just advance resistance studies but to assist inconsistency research as well.

These dual objectives are apparent in all three of our tests. First, organizational behavior studies traditionally investigate resistance with a different set of constructs than what inconsistency research has thus far considered. For instance, we have available to us, and focus on, the traditional organizational behavior construct of *participation*,

communication, structured procedure, managerial supportiveness and supervisor supportiveness. In doing so, we break with the traditional and ineffectual correlate set repeatedly studied in relationship to consistency. This new correlate set better maps important contemporary attitude theories and offers a glimpse into the potential shortcomings of previous research regarding this issue, as well as the shortcomings of the original theory that has driven those studies. Second, this new context of organizational transformation, marked by persuasion tactics, casts the study in terms of attitude *change*, not attitude *formation*. This is the first opportunity to consider inconsistency in light of attitude change, and thus in terms of process. Moreover, within models of attitude change, this mediating (process) step remains largely untested (Petty, Haugtvedt, & Smith, 1995). Therefore, we capitalize on the novelty of this context, and emphasize the process of attitude formation. Third, the nature of the change *environment*, marked by social pressures and professional considerations, represents a qualitatively new environment in which to study moderation. Moderation tests have largely succeeded. However, they have not had to measure inconsistency where social and professional pressures exert themselves on behavior. This may prove a new challenge for a test of moderation. The test of moderation in this context provides a forum to discuss how inconsistency may actually function in a realistic setting.



Our three test approach in this study squarely fills in the missing pieces in both resistance studies and inconsistency studies. Regarding resistance, our three tests cover the entire spectrum of attitude dynamics, from gestation to function. In doing so, the tests help each person understand his or her part in the process of converting attitude into meaningful action in an organizational setting. Regarding inconsistency research, the prior failings to validate certain elements of inconsistency's theory seems to have had a dampening effect on the interest in inconsistency, studies of which have proffered only meager scientific offerings in the last two decades. We concur with Eagly (1992) that good theory should attract supporters; lack of supporters may signal poor theory. Against this backdrop of weakly validated theory, a search for singular findings would appear misguided. Our three-test approach, therefore, hopes to provide an injection of adrenaline into the field. This effort directly dissociates itself from the piecemeal efforts which numerous researchers in social psychology have begun to identify as a significant weakness in traditional attitude studies (e.g., Eagly, 1992; Krosnick & Petty, 1995; Petty

et al., 1995; Prislin, 1996). In the present study, therefore, we offer a robust series of tests to boldly assert the potential of inconsistency in resistance studies, while also taking the necessary steps to improve upon the languishing, but promising, field of inconsistency research.

II. Literature Review

The Shortcoming of Resistance Literature

Organizational transformation may be defined as “deliberately planned change in an organization’s formal structure, systems, processes, or product-market domain” to achieve organizational objectives (Lines, 2005, p. 9). Such change can occur in large leaps or small steps. The kinds of transformation that have concerned researchers range in scope, from corporate mergers (e.g., Katz & Kahn, 1978) and leadership successions (e.g., Sonnenfeld, 1988) to new evaluation systems and process systems (e.g., Armenakis & Harris, 2009; Eby, Adams, Russel & Gaby, 2000). Change has at its core an objective to adapt to circumstances, to increase competitiveness, and to ensure survival. And yet, even those that subscribe to the culture of innovation and adaptation do not necessarily succeed in change efforts. Numerous studies have revealed that organizational transformation efforts more frequently fail than succeed (e.g., Burns, 2004; By, 2005; Christensen & Bowers, 1996; Gilmore et al., 1997; Isern & Pung, 2007; Kotter, 1996; Meaney and Pung, 2008). The trash bin of industrial history is, no doubt, littered with organizations that knowingly heeded the adage “Adapt or Die.”

Broadly speaking, two approaches within organizational behavior literature have influenced the dialogue as to why failure is so ubiquitous: a macro-perspective and a micro-perspective. The macro-perspective portrays resistance as *organizational* inertia, a problem of institutionalized routines and practices, an outcome of unsuitable organizational structure and culture (e.g., Damanpour, 1991; Hannan & Freeman, 1984; Robertson, Roberts, & Porras, 1993). The micro perspective, on the other hand, places the individual squarely in focus (e.g., Arendt, Landis, & Meister, 1995; Armenakis, et al., 1993; Bovey & Hede, 2001a; New & Singer, 1983). As products of social psychology, these latter studies aim to illuminate the “human condition” in the workplace. The material of investigation includes the common psychological notions of attitudes, needs, motivation, commitment, emotions, and information processing. This micro-perspective has in recent years reasserted its value relative to the macro-perspective. With prolific output, the micro-perspective has succeeded in revealing the inadequacy of a top-level view of change, where success or failure has been portrayed as occurring uniformly across the organization without attention to individual variance (Cole et al., 2006).

Having evidenced individual differences, the micro-perspective enriches the picture and has demonstrated the value of the viewpoint that *individuals* act, not organizations (Bartunek, 1984; Stensaker & Falkenberg, 2007).

The successful modeling of and intuitiveness of that argument has unfortunate consequences, however, for the discussion of resistance in both practitioner and academic circles. Surveys of industry regularly reveal that managers most frequently attribute failure directly to individual employee resistance, as opposed to the problems of corporate institutions (e.g., Martin 1975; Maurer, 1997; Prochaska, Prochaska &

Levesque, 2001; Regar, Mullane, Gustafson, & DeMarie, 1994; Spiker & Lesser, 1995; Waldersee & Griffiths, 1997). Much of the micro-perspective literature similarly perpetuates this management-centric, pejorative perspective with little awareness of the broader implications of such a bias (e.g. Beer, Eisenstat, & Spector, 1990; Kanter, Stein, & Jick, 1992; Schaffer & Thomson, 1992). Namely, the dialogue casts management in the role of providing good objectives and purpose, and employees in the role of providing obstacles and problems. The concept of resistance has, to the detriment of the science, been pared down to *solely* implicate the psychological state of the individual (Ford et al., 2008). Even in works that evaluate the effectiveness of specific management actions (Wanberg & Banas, 2000), the implication remains that management corrects for or responds to a psychological phenomenon that is, at its core, spontaneous, dysfunctional, and irrational.

Several conceptual works have made the argument that this dialectic is incongruent with contemporary trends in society and that it is incomplete for, if not philosophically detrimental to, the efforts to understand organizational transformations (e.g., Piderit, 2000). Regarding the first accusation, the workplace has evolved in the last two decades. Multiculturalism, a shift towards white-collar employment, and improvements to social awareness and tolerance have made it possible to emphasize the value of inclusion and diversity. Employers are more willing to entertain the possibility that employees can contribute positively to the dialogue about change (Piderit, 2000). Therefore, the ingrained pejorative perspective of individual resistance, occurring entirely as a product of the employee, would appear philosophically disconnected from these trends. Some have argued that, given the power of metaphor, Lewin's 1952

nomenclature of “resistance” should be altogether retired (Dent and Goldberg, 1999; Ford et al., 2008;). At the very least, undoing the negative impression left by decades of research requires an attentiveness to the reified biases that inform and resonate through our models and discussion.

The most recent publications, in the spirit of this criticism, have held one or both of the following objectives. First, some publications have sought to restore the balance of responsibilities among all participants (e.g. Stensaker & Falkenberg, 2007; Van Dam, Oreg, & Schyns, 2008). That is to say, they have reinterpreted the *social arena* where change takes place. Second, some publications have attempted to recharacterize the state of mind or mental processes in ways that deflect the accusation of a quick, final, absolute, and inevitable negativity (e.g., Oreg & Sverdlik, 2011). These studies reinterpret the *mental arena* in which so many prior psychological studies have laid out their arguments.

Three fields of study, in particular, may contribute to changing the discussion about resistance. First, *process models* for many years have attempted to codify “stages” of reactions to change (e.g., Armenakis et al., 1993). In doing so, they illuminate the needs of the employee, and therein imply a mandate for managers to meet those needs. Moreover, they have effectively incorporated the variable of time, which contradicts the notion of simple spontaneous responses. However, criticism of process models has pointed out that this approach downplays individual differences, and reifies management as merely a tool bearer in the act of persuasion (Ford et al., 2005). To date, the insights granted by these endeavors have not made gross modifications to the negative representation of employees. Second, studies of *managers-employee relationships* have discussed issues of faith, trust, social contracts, and justice to give stock to the unspoken

social constructs of culture that can interfere with change (e.g., Lines, Selart, Espedal, & Johansen, 2005; Stanley, Meyer, & Topolnytsky, 2005; Van Dam et al., 2008;). Such research invigorates the discussion of employee differences and perceptions, and heightens the discussion of manager responsibility in constructing a climate for change. However, employees still remain the *source* of resistance in these models. This approach represents a middle ground in the battle to modify the nature of resistance. Third, *sensemaking* has more emphatically established a neutral playing field (e.g., George & Jones, 2001; Stansaker & Falkenberg, 2007;). In sensemaking, employees and managers, alike, construct the arena for change. Both parties must interpret change, individual responsibilities, and the actions of the other. Ambiguity reigns in this interpretive arena, where employers provide information and impressions that employees must unpack; simultaneously employees give behavioral signs that employees must interpret as either support or resistance. In a balletic fashion, each adjusts and changes, building momentum to either success or failure. This avenue most aggressively reconstructs the meaning of resistance, disassociating it from individual owners. Going forward, each of these, in the right hands, can begin to correct the pejorative image of resistance as a simple, spontaneous, irrational, and employee-centric event.

However, much of this literature largely relies on abstract representations of mind, situation, and role that do not translate well into practical knowledge for practitioners. In lieu of this approach, an additional, more tenable argument has resonance on this issue. Several publications have implemented or called for the employment of the more inclusive construct of *attitude* typically employed in the field of social psychology, but largely absent in resistance studies (e.g., Lines, 2005). A

multidimensional concept of attitude, consisting of cognitive, affective and intentional mental processes, has served as the mainstay of social psychology. It has proven adept at modeling perception, bias, and prejudice as well as explaining how these mental tendencies occur relative to prior experiences, work environment, and social forces.

A specific aspect of a multidimensional attitude appears promising to reframing the nature of resistance. Namely, a multidimensional model of attitudes permits the identification of disconnections between the dimensions. These disconnections represent internal *attitudinal conflict* regarding an issue (Rosenberg, 1968; Tetlock, 1983; Tetlock, 1986). Within social psychology, these disconnections have revealed that overall evaluations of an issue may contain not just negative evaluations, but also simultaneously positive evaluations (e.g., Lavine, Thomsen, & Zanna, 1998; Rosenberg, 1968). Such a possible mixed attitudinal framework has implications for the nature of resistance. Specifically, the common portrayal of resistance as uniformly negative, distrustful, defensive, or willful would lack credence. Moreover, from a sensemaking perspective, since attitude governs behavior, the potential for conflicted attitude puts into question whether employees could even produce behavioral signals that managers would correctly interpret as resistance. Perhaps more than the other efforts today, the idea of conflicted attitude may most directly, and with the least amount of reliance of philosophical abstraction, undermine the common alibis proffered at employee expense. Namely, attitudes contain dimensions beyond positive and negative; therefore, the diverse behaviors that ensue reflect a diversity of thinking that goes beyond positive and negative. Against such a backdrop, resistance may be an over-referenced illusion; failure may be the result of other, unrecognized forces, including managers' over-eagerness to

codify behaviors as negative. Given the demonstrated potentiality of mixed attitude structures within social psychology, we test this construct in the context of organizational transformation.

Model Proposal

In the current study we introduce a construct that has previously not been employed in resistance studies: *affective-cognitive consistency (ACC)*. *Inconsistency*, specifically between cognition and emotion, has a long history within social psychology. Alongside *ambivalence*, it constitutes the common available means of seeking out conflicted positions about issues (Eagly & Chaiken, 1998). For the study of resistance, it is a logical form to employ. Resistance studies have generally fallen along patterns that one can categorize as studies of cognition and studies of affect. However, while the *interplay* of cognition and affect has broad theoretical and empirical support through social psychology (e.g. Eagly & Himmelfarb, 1978; Eagly, Mladinic, & Otto, 1994; Edwards, 1990; Fishbein & Ajzen, 1972; Katz, 1960; Zajonc & Markus, 1982), it remains sadly uninvestigated by resistance studies, which have built the science along segregated findings, and employed attitude as a singular rather than multifaceted construct (Piderit, 2000).

Resistance literature has produced many insights that fall into the discrete categories of cognition and affect. Oreg, for instance, discusses several key findings of the *affect*-based literature (2003). Individuals may resist through a feeling of loss of control. They may hold sway over different levels of emotional resilience to deal with the stressors. Individuals may show preference for low levels of stimulation and novelty.

Alone, these studies provide a sympathetic picture for the employee. However, they still characterize resistance as a product of employee frailty. Moreover, they only portray resistance as an affective event.

Other studies have focused on the *cognitive* task of accepting change, and have uncovered a clear set of rational needs for accepting change. These approaches largely rely on a history of *information-processing models* of attitude change, which espouse that effective persuasion requires individuals to comprehend and find logical support within a message. (e.g., Hovland et al., 1953; McGuire, 1969). Armenakis and Harris (2009) provide baseline requirements in one such influential process model. An individual must understand the necessity of change, and the appropriateness of the methods. The individual must see the potential for success, witness the commitment from leadership, and grasp the personal relevance. Lastly, the individual must see change as something other than a spurious fad. In other works, Armenakis also has discussed to need for congruence with personal values (Armenakis et al., 1993). Numerous process models of resistance shed light on the complex *cognitive* requirements of accepting change (e.g., Armenakis & Bedain, 1999; Isabella, 1990; Judson, 1991; Kotter, 1995; Lowstedt, 1993). However, they too miss a part of the picture.

While the literature clearly does not lack for explanations of resistance, they comprise an eclectic and disparate body of knowledge that suffers accordingly (Erwin & Garmin; Piderit, 2000). The weakness of an eclecticism becomes clear through a notional example. Two *separate* studies, an emotion study of anxiety, and a cognitive study about rational dialogue, could fail to contemplate how anxiety interferes with the attention to rational dialogue, or how rationality might suppress inherent anxiety. We

propose that if such studies were placed side by side in random order, one could develop a rather extensive and plausible list of conflicts between latent cognitive processes and latent affective processes.

Extant empirical literature within resistance studies would suggest conflict may be a widespread phenomenon. First, it has been shown that even the most sound corporate objective sometimes lack consonance with the honest interests and well-intended values of the individuals who comprise the organization (e.g. Zaltman & Duncan, 1977; Zander, 1950). Therefore, one should imagine that an employee might see the commitment from management and yet not realize the necessity of change (e.g., Oreg & Sverdlik, 2011). Or an employee might understand the purpose, yet feel debilitating anxiety about change. An employee might also experience conflict between short-term emotional needs and tenable long-term values. As a second empirical example, it has been shown that certain resistance behaviors may rest upon positive motivations, serving a well-intended, ethical role of questioning dubious policy (e.g. Graham, 1984; Knowles & Linn, 2004b; Modigliani & Rochat, 1995). This case not only suggests coexisting positive and negative forces at play in resistant behaviors, but truly brings attention to the nature of resistance. Should such *well-intended* behaviors be codified as resting upon negative mental processes?

We propose affective-cognitive consistency as a means to address this conceptually plausible phenomenon. Despite the inherent credibility of the notion of internal conflict, resistance research has not directly sought answers for the questions of how conflict functions and under what conditions it occurs. At the time of Piderit's conceptual work, no literature had sought to represent and operationalize resistance in

this manner. Since then, a few important voices have reiterated her argument (e.g., Lines, 2005). Two *qualitative* reports have specifically reflected on conflicting evaluations (Larson & Tompkins, 2005; Randall & Proctor, 2008). One empirical study has just recently been published employing a different construct than ours, namely *ambivalence* (Oreg & Sverdlik, 2011). Moreover, the issue appears to have gained some general resonance. Piderit's proposition has been cited numerous times (Oreg, 2003; Stanley et al., 2005:). Illusions to coexisting conflicted evaluations have occurred (e.g., Knowles & Linn, 2004a), and have been treated as a self-evident occurrence in the portfolio of possible mental constructs (e.g., Ford et al., 2008). Even outside of academia, the notion of inconsistency has some traction. For instance, a recent Pew Research report published parallel charts of the perceived positive and negative qualities of life in the military (Taylor et al., 2011). As a last example, in a qualitative study of program managers, respondents blamed ambivalent senior management as a problem (Ewusi-Mensah & Przasnyski, 1994). Internal conflict appears an accessible and relevant issue, but one that has little empirical support.

In proposing a model of affective-cognitive consistency, we have three goals relative to the field of organizational transformation. First, for an empirical contribution, we wish to determine if and how inconsistent attitudes form during organizational transformation, and how such attitudes function. Current studies have missed the opportunity to develop understanding of what may be the most common mental state regarding organizational transformation, the conflicted reaction (Piderit, 2000). Second, we want the study to reflect the overarching value of a multidimensional form of attitude, as a way to transform disparate mental functions into units of equivalent and thus

comparable form. Third, as a contribution to theory, we wish for these findings to stimulate the ongoing dialogue regarding the nature of resistance, and to provide concepts for adaptation into other organizational transformation studies. For instance, process models have already elucidated the dynamic environment where perception and interpretation may *shift* in temporal stages (Isabella, 1990). We propose, by way of example, that the classic sequential steps such as unfreezing-moving-refreezing model (Lewin, 1947), could play out individually as moving-moving-moving. Some individuals may, in other words, display inconsistency throughout the time frame set aside for transformation. Or, individuals may experience inconsistency during a particular step in a process model (i.e., *inconsistency-moving-freezing*). Providing concrete evidence of the role of conflicting attitudes should set the stage for these broader investigations.

This study represents a departure from present resistance studies. At the same time, the study also represents a dramatic change from preceding *inconsistency* studies. Previous studies have only investigated inconsistency in a relatively decontextualized format suitable for a study of attitude *formation*. The present study considers it in regard to *attitude change* (during persuasion), and in a very specific *social context*, the workplace. These novelties have important implications. First, these modifications of context guide us to consider *social constructs* relative to inconsistency that have previously not been tested. Second, these modifications require us to truly question whether previous findings of moderation truly are relevant for this context. Third, these modifications test the limits of inconsistency theory (and we must acknowledge that in our study). Current theory provides only partial guidance for the current endeavor. We must look across a wide spectrum of related research for additional guidance. In studying

inconsistency with these thoughts in mind, our study begins an important synthesis of research and ideas which hinders inconsistency today, and which has hindered related constructs in the past (Krosnick & Petty, 1995). Eagly has warned that “if investigators look only to the most obvious research, not only do they miss many potentially useful theoretical ideas, but also they allow their theories to be seriously limited by constraints of their research paradigms, which often allow only certain processes to be manifest (1992).” The challenge of incorporating inconsistency into a context-rich environment both threatens current inconsistency theory and forces a much-belated evolution upon it.

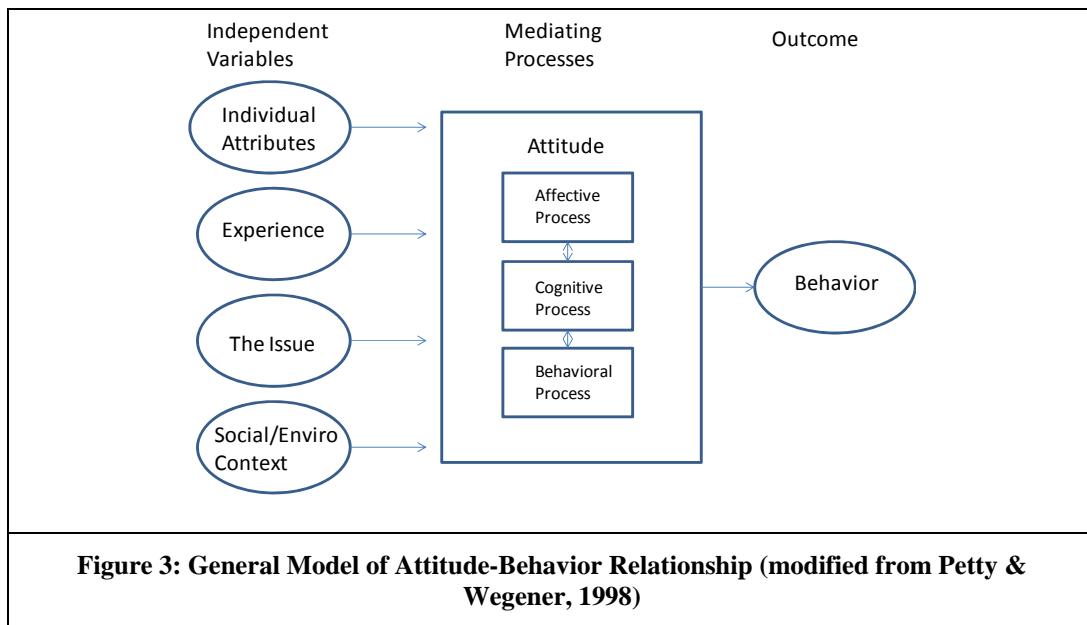
In the rest of this chapter we focus on the theory and evidence for multidimensional attitudes and inconsistent attitudes. The following review substantiates the strength of the argument for why inconsistency should play a role in organizational transformation. We pose three questions. First, how do inconsistent attitudes emerge or are become allayed in the context of organizational change? The argument for our antecedent set requires a synthesis of material that has not occurred in inconsistency studies yet, and comprises the bulk of our review. Second, is overcoming inconsistency an important step in changing attitudes towards an initiative? For this test of mediation we must return to the inception of the idea of inconsistency and towards theories from persuasion literature. Third, does inconsistency influence behavior? The test for moderation has substantial empirical evidence, but we reveal why our current context challenges the ability to generalize from that prior research.

Attitude

Inconsistency describes an attribute of *attitude*. Attitude has served as the most prominent construct in social psychology for many decades, and may very well constitute the “primary building stone” of the science (Allport, 1954, p. 45). In lay terms, the psychological construct of attitudes attempts to speak to the functions of the mind that infuse our passions and hates, attractions and repulsions, likes and dislikes (Eagly & Chaiken, 1998). Attitudes manifest themselves in a biasing of our evaluations, perceptions, and relationships to our world. Attitudes rest on prior experience (Allport, 1935), and create a readiness to act toward an issue (Kassajian, & Kassajian, 1979). Eagly and Chaiken provide a well-regarded inclusive and contemporary definition stating that attitude is a latent “psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor (2007, p. 598).”

Attitude plays an indispensable part in socio-psychology due to three factors: the inherent plausibility of the role of attitude to govern behavior, the centrality of attitudes in the human condition, and unbounded prospects of attitude. First, the alluring premise of attitudes is that individuals demonstrate consistency between inner states of mind and outward behavior (Cartwright & Harary, 1956; Heider, 1946). This model is seductive for its simplicity: An inner state of mind and the overt behavior display consonance. If one can figure out how to measure attitude, one can better predict behavior. Second, the model also seems appealingly molar in the human experience. Attitude, likely a psychological result of many experiences, firmly serves in a useful, central mediation role, explaining a myriad of influences on behavior (Petty & Wegener, 1998). The central role of attitudes can be visualized in one of the many heuristics of attitudes, as in

Figure 3. Third, the model is also unbounded. Attitudes may predict broad, enduring categories of behavior (environmentalism, political affiliation, prejudicial actions), or narrower, one-time behaviors (voting, shopping, name choice). In this way, the relationship between attitude and behavior might embrace all of social and personal existence (Petty & Wegener, 1998). For example, the large scale social phenomenon that amount to our common history (shifts in racism and gender roles) likely occur due to attitudes (Krosnick & Petty, 1995).



Inconsistency summons the same notion which has intrigued philosophers for millennia: being “mixed” or “torn” about an issue (Thompson & Zanna, 1995; Williams & Aaker, 2002). Numerous descriptors occur throughout the psychological literature to attempt to describe the concept: *ambivalence* (Eagly & Chaiken, 1998; Kaplan, 1972), *instability* (Rosenberg, 1960), *duality* (Williams & Aaker, 2002), *discrepancy* (Eagly & Chaiken, 1998; Priester & Petty, 2001), *intrapersonal conflict* (Priester & Petty, 2001),

incongruency (Fazio and Zanna, 1978), *variability* (Sparks, Hedderly, & Shepherd, 1992), *conflicted utility* (Sparks, Harris, & Lockwood, 2004), *mixed feelings* (Brown, 1965), and *conflicted motivation* (Conner, Sparks, Povey, James, Shepherd, & Armitage, 2001). Each term has its own nuanced implications, but each study has converged on one of two models: *ambivalence* or *inconsistency*. The primary purpose of both is to reconfigure attitude to account for mental conflict that interferes with the governing role of attitude. Comparisons to independent measures have substantiated that the measure of inconsistency does, indeed, relate to conflicted values at work (e.g., Liberman & Chaiken, 1991; Tetlock, 1983; Tetlock, 1986).

Inconsistency

The concept of inconsistency relies largely on a specific capacity of attitudes. Namely, attitudes encompass a *broad array* of mental activity, as theorized and evidenced through many mediating studies (Ajzen, 2001). The mediating role of attitude permits one to imagine attitude as a warehouse, a “conceptual arena” (Abelson & Rosenberg, 1958, p. 2), or a “cognitorium” (Rosenberg, 1968, p. 81). Inconsistency theory specifically utilizes three tenants of attitude related to its apparent breadth. First, attitudes form out of *multiple evaluations* and *multiple types of information processing*. Second, attitudes normally tend to demonstrate *consistency* across these multiple types of information processing. Third, attitudes are not *stable* or *fixed* mental constructs (Eagly & Chaiken, 2007). Each of these contribute to the theory and modeling of inconsistency. Namely, in this space, poor arrangements of material may occur. Rosenberg conceived

of the concept of inconsistency as a way to represent the transient process of attitudinal reorganization in light of new information.

The first important tenant of attitudes is that they encompass multiple evaluations. Our diverse and myriad experiences inform our attitudes. For example, a mention of communism may conjure up a American political discourse, images of Stalinism, memories of a grandfather who flew in the Berlin Airlift, and also personal experiences with welfare or state medicine. Rosenberg (1968) asked his audience to visualize a space filled with values that are tied together, such that moving one cannot but disturb another. Singer (1968) described this potential resonance of sub-factors as their “pervasiveness” (p. 73). Singer further characterized pervasiveness as “bothersome” (p. 73), in which wide-ranging, even unexpectedly eclectic thoughts and feelings could occur. More recent psychological studies (e.g., Liberman & Chaiken, 1991) and emerging neuroscience (e.g., Conrey & Smith, 2007; Cunningham, Zelazo, Packer, & Van Bavel, 2007; Gawronski & Bodenhausen, 2006) have found that attitudes are indeed embedded in broad networks of interrelated values. Attitude, perceived as singular, or as an average of sub-forces (Anderson, 1971), contain multitudes.

A measure of *affective-cognitive consistency* rests on more specific evidence of the multiplicity of attitude. Studies have identified certain building blocks of attitude. These building blocks, or *components*, consist of the different *psychological processes* of forming an attitude: *cognitive*, *affective*, and *intentional*. These three components constitute the tripartite view of attitude, which has largely informed contemporary views and models of attitude (Brown, 1965; Katz & Stotland, 1959; Krech & Crutchfield, 1948; Rosenberg & Hovland, 1960). The thought-based process approximates beliefs (Fishbein

& Ajzen, 1972). Alternatively conceived, it constitutes a rationalization and comparative analysis of an issue. The affective process describes the emotional, less reasoned reactions to issues. Fear, anxiety, mood, arousal, and empathy come into play in this domain (Edwards, 2002). Physiological research continues to reveal different brain patterns of these less-than-cognitive reactions to objects (Schimmack & Crites, 2005). Lastly, the intentional process describes a quasi-cognitive function in which one scrutinizes an issue through the filter of personal intentions. It captures a specific willingness to act. Decades of research have validated these categories of attitudes (e.g., Bagozzi, 1978; Bagozzi, 1981; Breckler & Wiggins, 1989; Ostrom, 1969). Although one may represent conflict among countless individual items, the existence of *components* provides us a convenient structure in which to represent conflict (Rosenberg, 1960), and helps us to differentiate the measure from test reliability artifacts (Schleicher et al., 2004; Norman, 1975).

The second important tenant of attitudes is that the components tend toward consistency, balance and redundancy. Abelson and Rosenberg (1958) point out the similarities of the main variations of the family of “consistency” theories: affective-cognitive consistency (Rosenberg, 1960), balance theory (Heider, 1958; Newcomb, 1968), the symbolic psycho-logic approach (Abelson & Rosenberg, 1958), and the congruity model (Osgood & Tannenbaum, 1955). Their shared viewpoints exist as fundamental concepts within attitude research. The theories explain that individuals seek to resolve the discomforts of inconsistent thoughts and values. The natural steady state of attitudes occurs when cognition and affect mirror each other in valence or favorability.

As a postulate to this tenant, Rosenberg imagined that inconsistency might occur as a *temporal state* during the process of attitude formation or change (1960;1968).

The third important tenant of attitudes is that they are not fixed in quality or intensity. Rosenberg proposed that each new experience with an issue or object has the potential to trigger attitudinal reassessment (1960; 1968). Although they naturally coagulate towards a stable state, novelty combined with some unspecified degree of personal profundity could trigger a reassessment of that stable attitudinal state. Given the diversity of individual experiences, Rosenberg believed that for any given issue one could identify within a population those who would find sufficient novelty and profundity to undergo an attitudinal reassessment (1968).

Rosenberg describes several different scenarios for restructuring to occur. First, the issue could trigger awareness of preexisting inconsistency, or flaws, in the tripartite structure of the attitude. In this case, latent inconsistencies previously existed below a threshold of awareness. Once aware, the individual must eventually resolve those inconsistencies. Second, one could hold a non-attitude, or “vacuous” attitude (1968, p. 82). This would occur when an individual has not extensively considered the issue previously. Inconsistency would manifest itself through an exploration of possible responses, thoughts and feelings, until a structure crystallizes. As a third and final scenario, counterattitudinal information (a persuasive argument), can lead to a restructuring of attitude. An individual would explore the alternative position, or attitude. The attitude becomes destabilized, “fragmented”, until thoughts and feelings can resolve themselves and find a consistent basis. An individual may in the end reject the counterattitudinal information and retain the original attitude, or accept the new

information, and modify the original attitude. The entire process produces instability, self-discovery, uncertainty, exploratory responses, and eventual compartmentalization of any remaining conflict. The tripartite view provided Rosenberg the common, convenient Gestalt by which to represent a state of temporary flux during the process of attitude formation and change.

Strength: Beyond Bipolar Representation of Attitude

The malleability of attitudes does not imply that attitudes change easily. Edwards, in reviewing the functions of attitudes for the individual, concludes that the process of changing an attitude presents a formidable challenge (1990). Lines warns that attitude toward organizational transformation is a *critical event* because attitudes, once formed, may prove extremely difficult to modify (2005). Since organizations generally do not have an indefinite time frame to institute change, and since multistage models emphasize the urgencies of each stage (e.g., Kotter, 1995), the rigidity of an attitude speaks to the basic concern for resistance studies.

Social psychology employs the terms *strength* to describe this aspect of an attitude (Krosnick, Boninger, Chuang, Berent, & Carnot, 1993; Rosenberg, 1968;). This dimension of an attitude differs from its *favorability* or *extremity*, which the Likert scale and other tools for attitude measurement tend to approximate (Abelson, 1995; Krosnick & Petty, 1995; Schleicher et al., 2004). Strength research considers numerous constructs as potentially aiding in the strength of an attitude. *Consistency, intensity, salience, accessibility, knowledge, centrality, embeddedness, complexity, importance, and vested interest* have served as prominent constructs in this field for many years (e.g., Bass &

Rosen, 1969). Strength is a heuristic that describes an attitude as possessing two features: *endurance* and *force* (Krosnick & Petty, 1995). Endurance encompasses both the ability to *persist* from day to day in and of itself, but also the ability to *resist* attack and persuasion. This feature most directly relates to the idea of stability, evoked by Rosenberg (1968). *Force*, on the other hand, reminds us that an intuitive notion of strength is not just that an attitude can endure, but that the attitude matters more than a weak one. And how does an attitude matter? It has *impact*. It is *consequential* (Pomerantz, Chaiken, & Tordesillas, 1995). From this perspective, strong attitudes should be more likely to guide behavior than weak ones (Krosnick & Petty, 1995). *Force* also describes the ability of an attitude to skew and bias *information processing* through psychological acts often understood as schema formation and scaffolding (Pratkanis & Greenwald, 1989). Such a feature of strength helps explain how a strong attitude affects our perception of the world as well as imparts a resistance to counterarguments. These forces, conceptually intertwined, explain attitude strength. As an added dimension of attitude, strength hints at how variables such as inconsistency could change the landscape of resistance studies.

Inconsistency research has substantiated its claims of functioning as a “strength variable” by demonstrating that inconsistency relates to all four main strength properties. In each case, inconsistency would weaken an attitude. First, inconsistent attitudes lack *persistence*. As the foundational property of the theory, Rosenberg firmly established with over a decade of research that consistency is the hallmark of a persistent or stable attitude (1960; 1968). Second, inconsistency lacks *resistance*. Norman has shown that inconsistent individuals conformed to a confederate’s oppositional response (1975).

Third, inconsistency has *impact* on behavior. Numerous studies have focused on this point by employing inconsistency as a moderator in the attitude-behavior relationship (e.g. Norman, 1975; Franc 1999; Schleicher et al., 2004). Consistent attitude predict behavior better. Fourth, inconsistency affects *information processing*. Several inconsistency studies have ambitiously explored this realm (e.g., Chaiken & Baldwin, 1981; Chaiken & Yates, 1985).

The concept of strength, whether employing inconsistency or one of the many other strength constructs, has greatly improved the study of attitudes and the fields of research that have relied upon attitudes. Strength adds a new vector to a traditional bipolar representation of attitude, one often measured along a Likert-type continuum. The aspect of attitude derived from a mere continuum likely represents the *favorability* or *extremity* of an attitude as opposed to its strength (Abelson, 1995; Fishbein & Ajzen, 1972; Schleicher et al., 2004;). Favorability and extremity has long appeared to be of dubious value in studying attitudes (Corey, 1937; LaPiere, 1934; McNemar, 1946). An important meta-analysis that ushered in a period of doubt in attitude research in the 1970s revealed that attitudes measured as favorability only account for about .30 of the explanation for behavior (e.g., Wicker, 1969). Strength variables have improved upon those finding and, therein, have dealt with the “most perplexing problem” of attitude favorability not meeting expectations (Bass and Rosen, 1969, p. 331). Because of the effectiveness of strength variables, an attitude moderated by a strength variable has been referred to as a “true” attitude (Rosenberg, 1968, p. 87), or a “genuine” attitude (Kaplan, 1975, p. 365). Others have referred to the “attitude-non attitude continuum” (e.g., Chaiken, Pomerantz, & Giner-Sorolla, 1995, p. 401). This is not simply didacticism;

both physiological and psychological research has substantiated that a bipolar (positive-negative) representation of attitude is insufficient (Cacioppo, et al., 1997). In seeking to determine the value of simple bipolar representation, some have speculated that mere *favorability* notionally suggests *different* attitudes which may cause different behaviors (Abelson, 1995; Fishbein & Ajzen, 1972; Thompson, Zanna & Griffen 1995). In the end, attitude research has treated the original attitude-behavior base model as effectively dead (Judge et al., 2001).

Despite this clear evolution of attitude modeling since the 1970s, resistance studies have almost universally employed a single dimensional and unqualified version of attitude. Therefore, resistance research provides practically a blank slate upon which to write a new model of attitude. The conclusion we can draw from inconsistency studies is that *consistent* attitude structures may, indeed, pose a problem for persuasion because such attitude display the aforementioned perceived “rigidity”. Inconsistent attitudes, on the other hand, may be easier to persuade. Other implications of the literature are that effective persuasion should have as its goal not just attitude change, but *strong*, *irreversible* attitude change (attitude with a stable, unwavering structure). That is to say, a manager might need to, indeed, reach the “hearts and minds” of the employees to engender reliable, enduring attitudinal support.

Strength Applied to Organization Transformation Behaviors

Direct empirical support does not yet exist for the claim that a manager must obtain a *strong* attitudinal support from employees in order to successfully transform an organization. Those who have called for the inclusion of a strength perspective in

resistance studies have, however, drawn that conclusion from the findings within attitudinal research. Namely, only an attitude that is both favorable and strong will provide unequivocal support for an initiative (Lines, 2005). Since empirical support does not yet exist for this conclusion, the researchers have speculated as to how known resistance behaviors would relate to a two-vector representation of attitude. The works of Lines (2005) and Bovey and Hede (2001a) propose similar heuristics for strength within resistance modeling.

The four quadrant representation in Figure 4, developed by Lines, attempts to configure typical behaviors into four different combinations of our two vectors: positive-strong, positive-weak, negative-strong, and negative-weak. The first thing to notice is that behaviors on the left side (strong) and on the right side (weak) differ significantly in character. One could characterize the strong behaviors as clear and obvious in terms of their favorability. The categorization of persistence, focus, and taking charge as products of positive attitudes requires little gamble. Likewise, categorizing sabotage and exit as products of negative attitude would seem riskless. Strong attitudes align themselves with unambiguous behaviors. As such, when dealing with strong attitude, a manager's task of assessing employee attitudes could be quite accurate.

Alternatively, the right side of the chart (weak attitudes) generates behaviors that lack clear definition, and that appear full of tension and ambiguity. One can see that weak attitudes might interfere with an employee's ability to take impactful action. Each attitude contains an inner contradiction, such as going along with the initiative yet remaining hesitant, or going through the motions but wrestling with the perceived counterargument. Employees may even feign support, employing differing degrees of

deception (Bercovitz, & Feldman, 2008; O'Reilly, Chatman, & Caldwell, 1991). The end state is unclear from these behaviors. One would draw such a conclusion from the findings of inconsistency in particular. Namely, inconsistent attitudes may force an employee to explore various actions or positions en route to crystallizing a true and strong attitude (Rosenberg, 1968). The true attitude-behavior relationship should appear weak during any given moment where attitudes are weak. Moreover, if an employee produces less obvious or erratic behaviors, a manager would likely attend less accurately to cues. That manager would thusly be apt to misattribute a supportiveness score to that employee.

One of the conclusions a manager should draw from this chart, therefore, is that weak attitudes might produce behaviors full of ambiguity and uncertainty that will complicate the responsibility of leadership. First, compliance, lip service, and organizational silence hardly seem like a foundation upon which an organization may build a successful transformation. Moreover, they contain an element of subterfuge and duplicity. In some respects, strong negative attitudes might produce a better scenario, since then management might become more aware of the issue. If left unnoticed, such behaviors could drain the momentum of a change initiative. Second, few behaviors on this chart would fully support a successful transformation. Only those in the positive-strong quadrant would appear to unequivocally add value to the organization. As a heuristic, this chart permits a clear picture of the challenging psychological landscape influencing organization transformation. An initiative may need to trigger not just a favorable reaction, but also a strong reaction. For the present study, that would imply

that an initiative would need to produce both positive thoughts and positive feelings about the issue of change.

	Strong	Weak	
Positive	Organizational citizenship Taking charge Pro-change behavior Persistence Focus Effort	Compliance Lip Service Organizational silence	
Negative	Exit Resistance Sabotage Whistle Blowing Cynicism Disengagement	Compliance Foot-dragging Organizational silence	

Figure 4: Relationship between Valence and Strength (Lines, 2005)

A comparison of the left and right side of the chart describes the case of moderation, where a base relationship between attitude and behavior changes when a strength construct is considered. Although Lines did not formulate this heuristic with inconsistency directly in mind (but rather all strength constructs), one can see how inconsistency may prove to be an ideal construct to begin the empirical test of this heuristic. Each of the behaviors on the right of the chart seem to directly speak to a realm where inner tension and contradictions reign. Going forward, if consistency helps contribute to strength, what can the manager do to foster consistency and to push attitudes toward the left side of the chart? This is a test of antecedents.

Antecedents: A New Methodology

In his conceptual works, Rosenberg set in motion the basic notions of what would trigger inconsistency. Contact with the attitudinal object, even as simple as a survey question, could trigger these processes (Rosenberg, 1968). However, the transformative value of the stimulus would ultimately depend on the individual's prior familiarity with, experience with, and knowledge of the issue. Higher levels of each of these should theoretically permit a well-structured attitude to already exist. Lower levels of these would enable a person to be more susceptible to persuasion and attitude change. Therefore, Rosenberg had proposed a set of *individual latent constructs* (measurement of mental qualities) as predictors of inconsistency.

While the individual arrives with certain latent constructs, the object (the issue) also comes with a certain *capacity* to interact with those constructs. Rosenberg dedicated considerable conceptual effort to reflect on this second potential set of antecedents, the *object attributes*. In synthesizing the many references provided by Rosenberg in his seminal works (1960;1968), the attributes of an objects most suited to triggering inconsistency are those of *novelty*, *profundity*, and *breadth*. Since certain qualities of the object may matter, inconsistency can be referred to as *domain specific*, not as a dispositional trait of the individual (Rosenberg, 1968). That is to say, every object has a differential capacity to trigger inconsistency. Therefore, two different antecedent sets exist for us to explore: individual latent constructs, and object attributes.

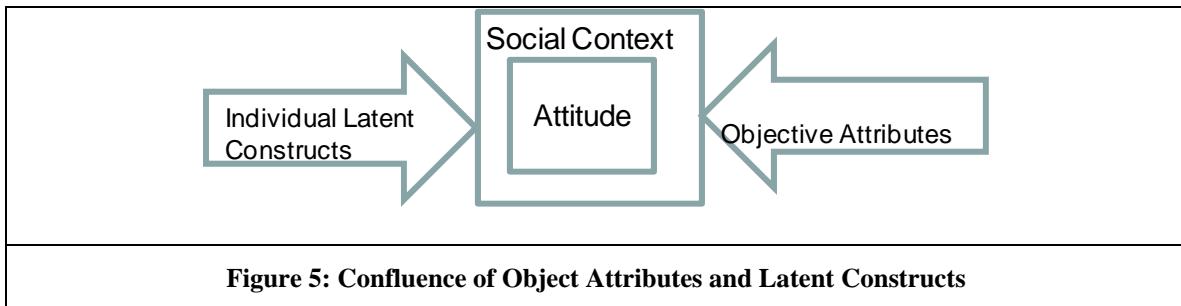
While Rosenberg offers up many potential lines of research, the direct empirical support for his premises remains thin. Direct studies of antecedents have been rare in inconsistency studies. Moreover, the studies that have occurred have focused exclusively

on the individual qualities such as familiarity, experience, and knowledge of the issue. Worse yet, contrary to theory, those studies have failed to produce meaningful empirical results. As for object attributes, advocates of inconsistency have not attempted to validate those antecedents, which is not entirely surprising since Rosenberg's depiction of those object attributes is rather serpentine. However, studies from outside of inconsistency research would appear to lend to support for his thinking.

The current study tests neither antecedent set directly, but rather takes a third approach which indirectly subsumes both lines of inquiry. We focus on the role of *context* and *situation*. Rosenberg emphasized that inconsistency is a situational phenomenon, not dispositional (1968). The inclusion of a context or situation perspective has several important implications, based on more contemporary environmental research. First, certain contextual attributes should aid in engaging and making relevant any given knowledge and experience during the interaction with the object. Second, certain contextual attributes should reduce the appearance of novelty, profundity, and breadth. The current study emphasizes the critical role of perception and how context influences perception. For instance, attitudinal objects don't actually *contain* such characteristics like a physical object. An object, by itself, is not novel, profound or broad. It is the individual's *perception* of the object's novelty, profundity, and breadth that should matter in the formation of inconsistency. Therefore, to talk of the attributes of an object is merely to describe the *potentiality*, or *likelihood*, that the object will be perceived as such. Similarly, latent individual constructs (like knowledge) do not necessarily work spontaneously, or with immediate accessibility (Fazio, 1987) when the individual makes contact with an object, but rather become relevant based on the contextual situation.

Therefore, the current study summons the role of perception and context to differentially produce inconsistency.

Figure 5 represents our own depiction of the convergence of influences in attitude formation. The individual and the object meet in a given context. That context may provide the correct material to generate consistent attitude formation, or it may not. At the center of the Figure lies the attitude, forming within the social context.



While previous antecedent research has considered only the dynamics from the left, our work looks at how an issue with the likely capacity to trigger inconsistency is differently *delivered* and differentially *perceived*. As Rosenberg had intuited, certain techniques of message delivery should be able to *augment* or *diminish* the capacity of the issue to trigger inconsistency (1968). We inject these situational and contextual variables into the discussion, applying for the first time a more comprehensive test of Rosenberg's theory. Contextual constructs may provide the missing element that may explain where prior studies have failed.

Antecedents: Individual Triggers of Inconsistency

Thus far, all studies have focused exclusively on latent psychological constructs of the individual. Consistent with a *selective* set of Rosenberg's remarks, the ones that

have appealed most to researchers are *knowledge*, *direct experience*, and *vested interest*. Although each represents half of the act of constructing reality, as we depicted in Figure 5, each has regularly failed to explain any of the influences on inconsistency. We can conclude from the overview of the research in Table 1 that the overall empirical evidence for inconsistency's antecedents is sketchy. Inconsistency appears to neither convincingly nor regularly relate to the plausible individual predictors of it. And this is unsettling. Quite simply, if inconsistency captures a malformation of an attitude, some of these "formation-inducing" variables should negatively correlate to it. Therefore, one must either question the validity of the construct (which Chaiken & Baldwin hesitantly do), or question the methodology, theoretical underpinning, and efforts of the previous tests (which we will do). Alternatively, one may speculate that the emphasis on individual latent constructs in conjunction with the failure to consider the role of object attributes represents a fundamental flaw in the approach of these studies. Whatever may be the case, until significant findings resting on sound theoretical foundations and solid methodology occurs, an important aspect of the discussion of inconsistency rests solely on theory and speculation.

This assessment of the literature makes some broad statements of the overall picture of predictors. However, Table 1 also beckons us to consider the few significant findings as well. In the present review, however, we will not address in detail the few significant findings in detail. Several reasons lead us to skip that task. First, none of the individual significant correlations have been replicated with confidence. Second, the authors of these studies have not definitively identified the findings in such a way as to be sure the signs printed in this chart are correct. Because a larger score of a "consistency"

operationalization actually signifies less consistency, terse reports and charts permit certain ambiguities. We have attempted to correct for or interpret the results in a logical way, sometimes changing the published sign of the relationship where ambiguities could not be resolved (e.g. Franc, 1999; Krosnick et al., 1993). Third, the intriguing results by Prislin were not identifiable as significant or not, and appear on the cusp of correlation size that may likely *not* be significant (with the exception of *extremity*). Moreover, these represent the best results of several tests Prislin ran, the others *clearly* not proving significant. Fourth, if methodology is to blame (which we contend and will explain), then ruminating about the importance of any particular finding is moot.

Table 1: Correlation Results to Inconsistency

Authors (date)	Attitudinal Object	Correlation to Inconsistency	Significance? Size	Operation
Rosenberg (1960, 1968)	various	stability	yes	Rosenberg
Norman (1975)	participation in research	stability	yes	Rosenberg
		certainty	no	Rosenberg
		importance	no	Rosenberg
Fazio & Zanna (1977)	participation in research	certainty	no	Norman
		direct experience	no	Norman
Chaiken & Baldwin (1981)	environmentalism	extremity	no	Rosenberg
		amount of prior thinking	no	Rosenberg
		personal importance	no	Rosenberg
		social desirability tendency	no	Rosenberg
Krosnick et al (1993)	capital punishment	knowledge	no	Rosenberg
		intensity	no	Rosenberg
	abortion*	importance	no	Rosenberg
		certainty	no	Rosenberg
	(* subject with significant finding; direction uncertain)	extremity	partial, $r = -.38, -.29, 0$	Rosenberg
		direct experience	no	Rosenberg
		latitude of rejection	no	Rosenberg
Prislin (1996)	affirmative action**	affective extremity	not stated, $-.16, -.03$	Rosenberg
		evaluative extremity	likely, $-.33, -.13$	Rosenberg
	legalized abortion	amount of experience	not stated, $-.16, -.10$	Rosenberg
		certainty	not stated, $-.18, -.12$	Rosenberg
	euthanasia	importance	not stated, $-.19, -.18$	Rosenberg
		vested interest	not stated, $-.16, -.19$	Rosenberg
	pizza	amount of previous thinking	not stated, $-.16, -.10$	Rosenberg
		self-reported knowledge	not stated, $-.10, -.09$	Rosenberg
	(**subject with significant finding)	working knowledge	no	Rosenberg
		accessibility	no	Rosenberg
Maio, Bell, & Esses (1996)	foreigners/immigration	latitude of rejection	no	Rosenberg
		ambivalence	no	Norman
		number of stereotypes	no	Norman
		number of symbolic beliefs	no	Norman
		number of emotions	no	Norman
		favorability	no	Norman
Franc (1999)	legalized abortion*** (direction uncertain)	extremity	no	Norman
		certainty	no	Norman
		importance	no	Norman
Hodson, Maio, & Esses (2001)	social welfare	latitude of rejection	yes, $r = -.15$	Norman
		ambivalence	yes $r = .24, -.29$	Norman
		extremity	no	Norman
		embeddness	no	Norman
		commitment (certainty & importance)	partial, $r = -.23, -.31, 0$	Norman
		latitude of rejection	no	Norman

Given the preponderance of non-significant findings, one may be apt to take the same approach toward them as well – to not delve into specifics. However, the contradictory and null findings for the relationship to *ambivalence* do require some attention since several writers have identified ambivalence as a variant of inconsistency

(e.g., Eagly & Chaiken, 1998). In truth, the positive correlation to *ambivalence*, found by Hodson, Maio, & Esses (2001), is both logical and predicted (e.g., Thompson et al., 1995). However, the additional negative correlation (within the same study!) as well as the null finding by Maio, Bell, & Esses (1996) quickly put into doubt the value of the sole positive correlation. We offer several practical mathematical explanations which the authors of these studies have failed to recognize. First, ambivalence generally employs a nonlinear math, while inconsistency applies a linear math (Breckler, 1984). Second, each employs vastly different survey tools. Ambivalence employs a semantic differential scale (Green & Goldfried, 1965; Kaplan, 1975). Such scales tend to impose conflict onto an attitude regardless of whether one is felt or perceived, compartmentalized or not (Breckler, 1994; McGregor, Newby-Clark, & Zanna, 1995; Priester, Petty, & Parks, 2007). Inconsistency, on the other hand, often employs a traditional Likert question format, which, depending on the nature of the questions, has a differential ability to tease out fine differences. Third, theory from Rosenberg would suggest that data from the lower range of the measure may be fallacious. As such, both tools contain sufficient peculiarity that they do not lend themselves to comparative analysis.

This comparison of the constructs has implications for future studies as well as our study. Future studies will need to determine how these two constructs conceptually differ, and whether they serve science best by remaining distinct constructs or by changing their operationalizations to converge upon a common understanding of the phenomenon. Our study must recognize that the operationalization of inconsistency may still require modifications, based on evolving research findings from ambivalence (e.g., Priester et al., 2007). Though we do not engage in that endeavor in this paper, we realize

that our tool may still only provide *approximations* of our intended construct. This is a frank admission of a science still establishing itself. The tool itself may require a future review to fine tune it for its intended use. That being said, certain clear methodological improvements can still be made in the meantime. Our study identifies and corrects for those.

Methodological Limitations of Prior Tests of Correlation

Two methodological limitations put into doubt the value and meaning of both the significant and non-significant findings to date. Only the studies by Fazio and Zanna (1977) and the study by Franc (1999) are immune from the potential confounding influences of these methodological limitations. First, the majority of research has occurred in broad strength studies with alternative motives. These alternative motives may have prevented more informed analysis. Second, these studies suffer from mathematical peculiarities associated with Rosenberg's operationalization. Only the studies since 1996 have dissociated themselves clearly from what we feel is an antiquated operationalization. However, these improved studies have yet to explore the wide array of possible antecedents, and still suffer from the first limitation (the alternative motive).

As a first critique, much of the above research has not occurred in order to directly investigate the nuances of inconsistency. Instead these studies have occurred as part of a broad analysis of strength variables. In a rather contentious debate, the studies have focused on factor analysis. Some have hoped for factor loadings (e.g., Abelson, 1988; Maio, Bell, & Esses, 1996; Prislin, 1996), while others have sought to dispel such a concept (Krosnick et al., 1993). In both cases the factor loadings of numerous constructs

have held these researchers' focus. The impetus behind these efforts was the recognition that numerous strength variables studies have occurred in isolation, and that the possibility of multicollinearity, conceptual overlapping, and redundancy had not been investigated (Krosnick, Boninger, Chuang, Berent, & Carnot, 1993; Krosnick & Petty, 1995; Prislin, 1996). Parsimony theories emerged to recommend subsuming multiple constructs. In this context, the specific null findings for inconsistency have not alerted the researchers to validity issues, as it should to one attending specifically to inconsistency.

Taken out of context, these factor analysis studies provide great support for the unique contribution of inconsistency to attitude formation. The various inconsistency types (affective-cognitive, affective-evaluative, cognitive-evaluative) have loaded together, but entirely separate from the other strength constructs. Drawing a conclusion of inconsistency's unique value (as they have done), however, remains at odds with what consistency research needs first and foremost at this time. Inconsistency needs additional evidence of validity. Failing to load with other constructs may simply provide evidence that inconsistency is an invalid subset of constructs amidst a sea of valid ones. Moreover, they likely load with each other simply due to the fact that they are all constructed from the same parts of the same data, thusly displaying built-in multicollinearity. Therefore, we feel that this literature has little capacity to shed any light on the *actual* relational or validity status of inconsistency. These studies' silence regarding illogical findings suggests that the researchers conducted an incomplete investigation as it pertains to inconsistency. We must conclude that more thoughtful investigation may have either led to modifications of their methods or to insight of methodological deficiencies.

As a second critique, the best explanation for the null findings relates the operationalization of the variable. Rosenberg's measure of inconsistency is measured in a peculiar way. The scores on the Affective attitude measure are summed. The individuals are *ranked* based on this sum. The same is done for the Cognitive attitude measure. ACC is then arrived at by taking the Absolute Value of one rank minus the other. The idea is that if a person is 10th highest on the Affective measure, to be consistent, that person should be 10th highest on the Cognitive measure. Anything other than that represents inconsistency.

Of all conceivable operationalizations, this seems most likely to generate peculiar numerical results. Consider the problem from the perspective of the most egregious scenario. One can imagine situations where an entirely consistent person (40 out of 50 on one scale, and a 40 out of 50 on the other) can be outranked by his more of his colleagues on one measure than on another. That person then ends up with an inconsistency score, when in fact the individual was entirely consistent. Such a measure would be outright fallacious. The erratic results possible throughout the continuum speak of the tools' unreliability.

We argue that Rosenberg's math is ultimately a foil which must be discarded. Repeatedly, researchers have deferred to it with no examination, calling it the traditional method (e.g. Chaiken et al., 1995; Schleicher et al., 2004;). Zhou, Wang, Dovidio, and Yu (2009) even refers to it as the "classical" form (p. 786). However, this operationalization suffers fourfold. First, it can fabricate inconsistency scores where no inconsistency occurs. Second, and related, it irregularly transforms differences among individuals. Individuals with the same *dissimilarity* between components can end up

with different inconsistency scores, or vice versa. Third, the tool compounds random error, where one's inconsistency measure is a result of both one's own random error as well as someone else's (Judd & Krosnick, 1989). This is a statistical nightmare that none have addressed. Fourth, the tool implies that one's mental inconsistency score should reflect one's consistency *relative to others*. No theory has espoused this. This last point is problematic for studies. If relational consistency were of importance, than the tool should not be used across different work places or climates, but only among individuals who share the same relational climate. Schleicher's choice to use Rosenberg's operationalization among different firehouses is, therefore, quite dubious. Together, these points reveal the statistic, methodological, and theoretical problems with using Rosenberg's operationalization. While the tool may have served *well enough* to categorize individuals into two cohorts (high/low), it does not have the validity for direct relational analysis with other variables (nor for moderated regression analysis, for that matter). The numerical outputs are broad and rough, rather than precisely meaningful in and of themselves. His scores function as a mere categorization tool; and this is how he employed it – to create high and low cohorts. It is not a differentiation tool necessary for relational analysis.

For relational analysis one must turn to a different operationalization. Norman tested an alternative version to account for some of the erratic results that he theorized would occur (1975). It appears to have attracted attention with its greater face validity (e.g. Fazio & Zanna, 1978; Franc, 1999;). It has been employed by two broad studies of the strength variables (Hodson et al., 2001; Maio et al., 1996). Therefore, a fix for Rosenberg's operationalization already exists for the current and future studies.

Guidance for a New Antecedent Set: The Elaboration-Likelihood Model

The previous discussion identified flaws in prior studies related to the *math* employed as well as to the *effort of analysis* (a product of ulterior motives or biases of the research). These place in doubt the value of any of the discrete findings. However, a much more important flaw may have occurred in the previous test designs. That flaw may relate to the basic theory of inconsistency. Namely, the choice of antecedents and the choice of how to include them in the models may have been misguided. First, the tests have focused exclusively on individual latent constructs. They have ignored a second set of potential constructs, the object attributes. Second, they have studied latent constructs only individually. They have not sought complex interactions between the individual latent constructs. We will consider the implications and solutions for each of these potential flaws.

The Inclusion of Object Triggers of Inconsistency

Inconsistency research has not directly studied the possible effects of object attributes in generating inconsistency. Therefore, the most obvious advancement of inconsistency research would be to include object attributes. Indirect sources regarding object attributes suggest that such a study would prove fruitful. A vast amount of research has occurred regarding the mechanisms inherent in the theory of inconsistency since the inception of inconsistency theory. Namely, information processing and attitude change have been studied exhaustively. These mechanisms interrelate to the theory of how inconsistency occurs. Rosenberg's theoretical foundation of the role of novelty, profundity, and breadth, in particular, find support in these outside sources.

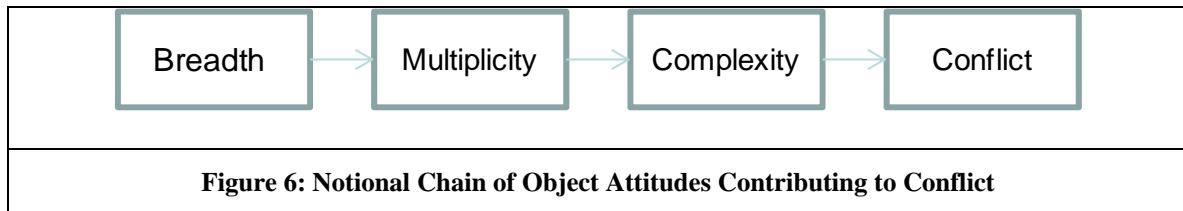
We will begin with what the literature can relay about *novelty*. In Rosenberg's portrayal, novelty should trigger heightened information processing which, thereafter, destabilizes the attitude to a state of inconsistency. Inconsistency studies have not directly tested this. However, ensuing research from other fields has provided indirect support of this logic. First, novelty does appear to stimulate information processing (Petty & Wegener, 1998). Seen from the perspective of the individual, an attitude based on a fully known issue (i.e., not novel) is more resistant to change (stronger) than a less well articulated, poorly structured attitude (Pratkanis, 1989). Although Pratkanis employed different constructs, the language is identical to that of Rosenberg's theory. Similarly, an attitude based on less information has a less well developed schema (Tesser, 1988). Even cultural truisms (i.e., the value of teeth brushing) seem subject to persuasion primarily because the attitude exists on little knowledge or prior discussion (Pratkanis & Greenwald, 1989). The inference possible from these findings is that novel information can trigger the information processing that might destabilize attitude en route to change.

Rosenberg, also felt that the form or delivery of the message would be important for the occurrence of inconsistency. Again, outside research has substantiated this. Novel *forms* of communication, for instance, may influence information processing and destabilization (Smith & Petty, 1996). For example, schematically inconsistent information can stimulate self-investigation leading to destabilized attitude (Cacioppo & Petty, 1987). Also, weak arguments, surprisingly, can do so as well simply because they are unexpected and confusing (Maheswaran & Chaiken, 1991). Aspects of the quality and technique of the message have remained untested within inconsistency research.

Rosenberg also implicates the force or persuasiveness of the message. Specifically, the object must be profound and broad. Regarding profundity, a message must provide sufficient force to reveal a threshold of ignorance below which inconsistency could persist without bother. On the matter of breadth, an issue must shake the tree of attitudinal material in a *certain way*. The attitudinal object must have resonance across a structure, where multiple “loci of affect” within a complex structure could be influenced, revealing hidden inconsistencies (Rosenberg, 1968, p. 77). This summarizes Rosenberg’s basic theory. Despite the clear identification of the object as the “actor” in the description, the tests of this theory have, however, focused on the latent constructs of *importance* and *vested interest*. Regarding object attributes such as profundity and breadth, inconsistency literature has been silent.

Research from other fields has stepped forward to clarify the roles of profound and broad objects, and have revealed the prescience of Rosenberg’s work. Research into the subject matter of *multiplicity*, or *complexity*, in particular, seems relevant. For instance, some topics evoke fewer contradictory evaluations (such as sports and music), while others summon numerous more contradictory evaluations (welfare, nuclear energy, defense spending) (Pratkanis, 1984; Pratkanis & Greenwald, 1989). One can note qualitative differences between the former topics and the latter. Broader, grander, or more profound topics appear to have the best chance of summoning contradictions. The study of complexity (Bieri, 1966), dimensionality (Scott, 1963), and differentiation (Zajonc, 1960) would support this conclusion as well. Together they reveal a chain of plausible causality (Figure 6). Namely, they reveal that aggregated attitudes on aggregated topics (broader issues) rest on more associations and complexity; moreover,

complexity predicts conflict (e.g., Tetlock, Peterson, & Lerner, 1996). In other words, the more conflicted the attributes of the issue are the greater potential for an unresolved attitude. Ambiguity research seems related. It demonstrates that people are less certain about an object when the respective number of its good and bad attributes tend toward equivalence (Lemon, 1968).



These studies go well beyond the rough descriptions which Rosenberg offered as predictors of inconsistency. In many respects, this chain of causality represents an advancement in social psychology. At the same time, it merely flushes out, and makes more compelling, the probable veracity of Rosenberg's early roughly hewn premises. It would appear that if advocates of inconsistency have previously overlooked this antecedent set, sufficient evidence exists now to focus on it. One may even conclude that ignoring the variance of perceived object attributes represents a significant flaw if prior research.

To date, inconsistency research has not studied any aspect of this potential chain of causality. The closest test of any of its logic is anecdotal evidence provided by Prislin (1996), in which she changed the object along a dimension of profundity and breadth to find that inconsistency levels changed predictably. On the other hand, Gross, Holtz, and Miller (1995) have already folded *ambivalence* into the discussion. We argue that the

logic should hold for inconsistency as well. Multiplicity, complexity, and the number of potential conflicts inherent in the issue likely serve as an important function in an information process that generates inconsistency. Since this has not been studied relative to inconsistency, it would appear that many empirical tests await to link these numerous outside studies to the inconsistency concept. If nothing else, one must question whether the lack of controls for a variance in perceived object attributes led to the conflicting and equivocal results of prior studies of antecedents.

The Value of Object Attribute Considerations for Resistance Studies

Looking at the research that has taken place relative to inconsistency, we can infer that the issues which inconsistency literature has studied – such as welfare, nuclear energy, and abortion – have actually implicitly provided the necessary complexity and profundity for inconsistency to occur. That is to say, these issues at least met the criteria of being novel, profound and broad, even if their variance was not included in the model. This begs the question: Assuming the object must contain a certain degree of these object attributes, does organizational transformation meet the required threshold of these qualities of novelty, profundity, and breadth in order to even trigger inconsistency?

Regarding novelty, we presume that it occurs, on some significant level, for most employees during a change initiatives. Almost by definition, organizational transformation provides novel stimuli and material for contemplation. In support of this, the research on the value of routines suggests that change initiatives may have a rather low threshold to trigger psychological reactions (Oreg, 2003). Initiatives that modify

routines inject novelty into the daily actions of individuals and, therein, force a confrontation of the mind with novelty.

On the matter of breadth and depth, one has to more closely assess the *type* of change at hand. Independent research about change agents has categorized organizational change agents into three levels of significance: alpha, beta, and gamma (Beer & Walton, 1987; Golembiewski, Billingsley, & Yeager, 1976; Porras & Silvers, 1991). Alpha describes a mere variation in the current state or routine. Beta changes require a new understanding of the issue. And Gamma requires a complete reconceptualization of a matter, an addition to or a replacement of a perspective – something along the lines of Kuhn's concept of a paradigm shift (Kuhn, 1962). The authors associate beta and gamma with important resistance effects.

This codification of *change-types* relative to resistance provides an interesting parallel to the study of *object attributes* within social psychology. Each attempts to measure the potential significance of an issue to an individual. Moreover, each relates to information processing challenges. Given our analysis of what should trigger inconsistency, we would speculate that beta and gamma categories (which constitute the bulk of the types of changes that have been studied, and which strongly relate to resistance) should *also* provide sufficient material for inconsistency to occur (Piderit, 2000). Why would that be the case?

We can look at that from two perspectives. First, from the perspective of the individual, beta and gamma changes should place the greatest forces on attitude structure because they demand more than mere mindless behavioral responses, but rather an intellectual understanding and an internalization of the principles underpinning the

initiative. That represents a high demand for information processing. Second, from the perspective of the object, beta and gamma changes contain multitudes, complexity, ambiguity, and conflicting material. The logic that developed this system of *change types* mirrors the logic that we employ. Namely, certain change initiatives present demanding situations that tax the information processing of individuals. We add that in such a challenging information processing environment, inconsistency may occur. Resistance studies have already recognized that *object uncertainty* during beta and gamma changes, especially in regards to how the initiative affects one's personal values and goals, appears an important factor in how individuals react to change (e.g., Isabella, 1990; Lines, Selart, Espedal, & Johansen, 2005). Missing in those previous resistance studies, however, is the contemplation of inconsistency in those reactions. An inconsistency study would appear a nature extension of the thinking already occurring relative to change types.

The only question remaining is how to best introduce the concept of object attributes (as perhaps the measure of change's profundity and breadth) into a study of inconsistency and resistance simultaneously. One preexisting response to beta and gamma changes provides us direction. Resistance research has responded to the troubling aspects of beta and gamma changes by considering the role of others in easing the burden of organizational change. We take a similar tact. This forces us to leave behind a rich bevy of potential discrete hypotheses regarding object attributes which we have "teed up" in the analysis so far. That is to say, we could use a measure of the object's objective or subjective profundity, importance, or scope (i.e., setting those as variables). However, current research into resistance inspires us to take a different tact.

We look at the role of others in mitigating the influences of a presumed preexistence of significant levels of those attributes. In this approach, we can assume that beta and gamma changes inherently provide profundity and breadth. However, since the ultimate issue of importance is the *perception* of profundity and breadth, we can either choose a subjective measure of those constructs, or we can take our approach. We will determine how managerial, situational, environments elements during the change process can reduce complexity, profundity, ambiguity, and novelty of the change initiative, and therein make the process of attitude formation easier. Without attention to the object attributes, prior studies have missed an important line of research with many potential vectors of inquiry. Given the important extant literature within resistance studies regarding environment and the role of leadership, we choose to consider those influences in our model.

The Inclusion of the Elaboration-Likelihood Model

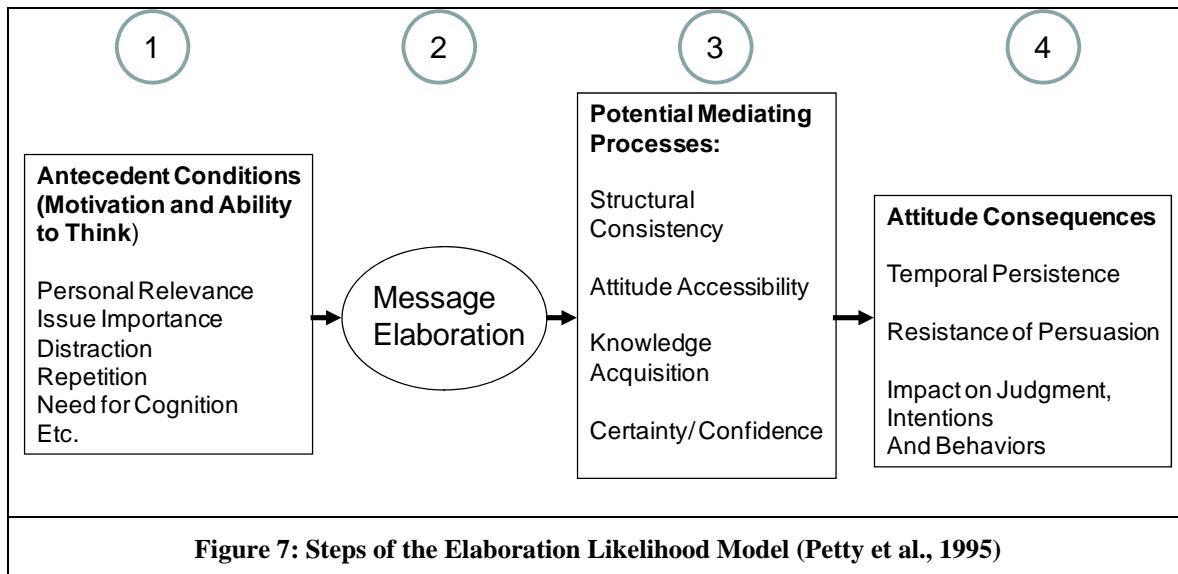
A second failing of previous inconsistency research relates to *how* it has tested the latent construct. Looking at the failure of their methodologies will provide us additional rationale for the choice we make to test environment or contextual factors in our model. Tests have traditionally tested the numerous constructs related to two general concepts: the amount of *direct experience*, and the *vested interest*. The first implies passive exposure, the other a specific motivated relationship to the issue. Neither grouping of antecedents has produced significant results. Several theories of attitude formation would suggest this approach is correctly focused, but incomplete. Models such as in the Theory of Planned Behavior (Ajzen, 1991), the Heuristic-Systemic Model (HSM) (Chaiken,

1987), and the Elaboration Likelihood Model (ELM) (Petty & Cacioppo, 1986) emphasize that complex dynamics involving *multiple* latent constructs govern attitude formation. Each of these models has sufficient similarities to accommodate and explain many results (Petty & Wegener, 1998). We will specifically look how the ELM would provide direction for a modification of the approach taken thus far.

The ELM (Figure 7) specifically identifies two necessary processes in order to formulate a well-structured attitude (Petty & Wegener, 1998). First, an individual must have the *motivation* to engage an issue. This references the traditional variables of *vested interest, personal relevance, and importance*. Second, the individual must have the *opportunity* to engage the issue. This covers the traditional variables of *knowledge, direct experience, and amount of prior thinking*. Figure 7 shows the stages from motivation through the elaboration stage, where opportunity meets motivation. The confluence of motivation and opportunity leads to *elaboration* which leads to consistency and strong attitudes.

The ELM proposes that mere opportunity to previously assess an issue is inadequate to produce consistency attitudes. One must also have motivation to seize that opportunity in an active way. Developing a well-structured attitude, from this perspective, requires interest to engage in the information processing. Processing does not simply befall a person. It requires analysis, synthesis, contemplation and reflection. Alternatively, we should not assume that motivation produces opportunity. Barriers to opportunity exist in real practical terms. Exclusion from social or formal discussion, distraction, miscommunication, or transmission interference (noise, etc.) would delimit opportunity. Therefore, one must either assess *both* motivation and opportunity in order

to capture all the dynamics of consistent attitude formation, or one must develop a latent construct that embodies both elements. Studying each in isolation provides an incomplete picture of the antecedents of information processing and thus to consistency forming dynamics.



The basic principles of the ELM rest upon well-developed research from various sources. The ELM treats information processing from a holistic perspective (Petty & Wegener, 1998), and represents arguably the most important models of attitude formation today (Crano & Prislin, 2006; Petty and Wegener, 1998). Moreover, it is consanguineous with inconsistency theories. Both rely on notions of schema. Illusions to schematicity occur throughout consistency theories as well as in reference to inconsistency (Rosenberg, 1968; Schleicher et al, 2004). As it applies to the ELM, when the conditions for elaboration are present, schema become summoned by motivation and opportunity,

and become accessed, rehearsed, and manipulated more extensively than otherwise (Petty & Cacioppo, 1986). This elaboration strengthens the interconnectedness of components within the schema, creating greater consistency and resilience. This basic interpretation of strong attitude formation finds broad support throughout the literature (e.g., Judd & Krosnick, 1989; Thompson & Zanna, 1995; Wilson, Kraft, & Dunn, 1989), and appears amenable to the concept of inconsistency.

The significant covariance between *commitment* and inconsistency found in prior research (Hodson et al., 2001) may provide evidence of this thinking. In Hodson et al.'s study *commitment* represents the product of two traditional variables, *importance* and *certainty*. *Importance* taps the issue of motivation. Motivation should negatively vary with inconsistency. *Certainty*, though not directly a measure of opportunity or experience, may imply that experience has occurred since certainty varies with repetition and experience (e.g., Krosnick & Petty, 1995; Rosenberg, 1968; Ruth, Gross, Holtz, & Miller, 1995). Certainty should negatively relate to inconsistency. The results of this study show, indeed, a negative relationship between commitment and inconsistency. It may provide the first look at evidence of the ELM working in relationship to inconsistency, though the authors do not comment on the novelty of this finding nor expound upon it. We feel that *commitment* represents the type of construct upon which inconsistency research should focus.

How is it that inconsistency research has not yet applied the guidance of the ELM? Isolationism appears to be to blame. The authors of the ELM have provided extensive research on attitudinal conflict theories. However, their efforts have remained entirely trained on the sister construct of inconsistency, *ambivalence*. The scientific

isolationism that has characterized all of the strength variables (Eagly, 1992) has yet to ease in the field of attitudinal conflict. It renders the studies of inconsistency and ambivalence nearly foreign to each other. In addition, Chaiken, the most prominent of modern proponent of inconsistency, had devised the competing, though related, model of the HSM (mentioned previously). While Chaiken does not summon the HSM in her studies of inconsistency, personal biases may have limited her inclination to consider the ELM. Lastly, during Chaiken's work in the 1980's, the ELM still lacked much of the validation it has today. In fact, the unfurling of its components and ultimate validation are still occurring today (Petty et al., 1995).

The current study, therefore, has implications across three domains: inconsistency research, resistance research, and ELM research. The ELM remains a composite of small pieces of evidence, with some missing. For instance, of all the pieces of the puzzle that have been examined, the postulated *mediating* processes in this model (the third step in the process of Figure 7) have received little scrutiny (Petty, Haugvedt, & Smith, 1995). Inconsistency research has, indeed, provided evidence of the steps 3 and 4, but none of steps 1 and 2. In other research, much of the other efforts have measured antecedents directly to the strength results (steps 1 and 4), and skipping over the step where consistency would come into play (e.g., Conner et al., 2002). The results are supportive of the ELM, though they remain disjointed. Tests of the mediating steps have begun (e.g., Petty, Haugvedt, & Rennier, 1995). However, the mediating studies have not yet specifically related to consistency. Studying a new antecedent set for inconsistency (informed by the ELM) should contribute greatly to the entire concept.

Resistance Constructs as Antecedents to Inconsistency

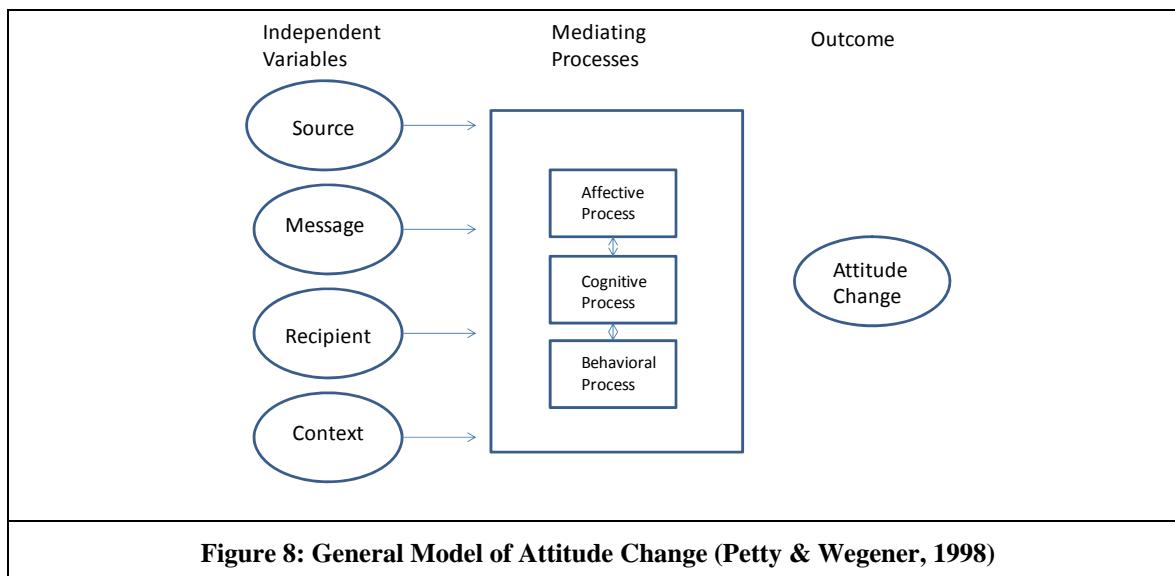
What guidance does the ELM provide in the context of organizational change?

As mentioned previously, the current study investigates inconsistency in the presence of persuasion. The ELM, through its incorporation of multiple variables, serves not just to elucidate the nature of attitude formation but also to explain the nature of persuasion (Petty & Wegener, 1998). ELM helps explain the interplay of forces of *message*, *recipient*, *source*, and *context* into a single model. Figure 8 provide a generic view of mediational analysis of attitude change that has guided most persuasion research (Petty & Wegener, 1998). It relates to our model of the interaction of individual and object attributes. Attitude formation and change occur in response to all four elements of this Figure. They occur through the correct interplay of the attributes of the attitudinal object, the messenger's style, the recipient's prior knowledge structures and attitude, and the social context (McGuire, 1969; Petty & Wegener, 1998). An examination of just one independent variable would appear to be inadequate except under controlled circumstances. Oreg, indeed, found that information alone was not enough to reduce resistance to organizational change (2006).

Given our context, an individual in the role of persuader (for example, the manager) filters or influences the whole array of potential triggers for information processing: the amount of knowledge, the quality of message, and the sense of importance. The messenger may also intentionally frame the issue to reduce ambiguity and complexity, and to make it more accessible for review. An effective persuader is aware of context, and is sensitive to the needs of the audience. Such a manager can create an environment and message that meets the inherent needs of individuals to engage

in elaboration. This inserts the manager into the mediating role between the object and the individual. In the most basic level, Norman (1975) revealed that the messenger (a confederate) plays an important role in persuading an inconsistent individual. However, Norman does not ask if either the *manner* or the *quality* of the persuasion matters.

Persuasion research and the strength of the ELM model direct us to ask those questions.



Based on the ELM, inconsistency should negatively correlate to managerial techniques which would reduce the ambiguity and complexity of the object, improve the quantity and quality of information, help provide a sense of importance and personal relevance, and stimulate the motivation and concern about the issue at hand. The manager can touch upon all the constructs outlined in the literature review thus far to explain the attitude formation.

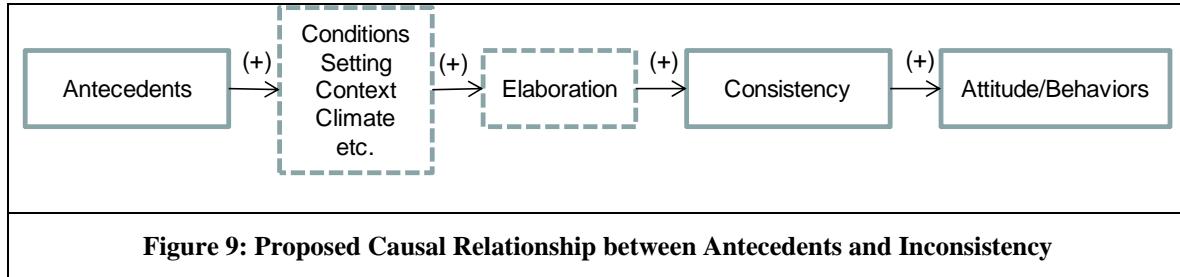
A set of constructs exists within resistance studies that imply actions such as we have just described, that would produce a conducive environment. Resistance studies have demonstrated a value of the following constructs in both influencing attitude and in

reducing behavioral resistance: *communication, participation, managerial consistency, managerial understanding of the issue, managerial supportiveness, and structured methodology* (Erwin & Garman, 2010; Lines, 2005). A review of their respective findings as well as a dose of theory from the ELM suggests they should also reduce inconsistency.

The task at hand requires a degree of inference. First, these constructs have not previously been studied relative to consistency. We need to build that relationship based on the nature of their relationship to attitude and behavior. Second, they also differ qualitatively from the precise constructs aimed at specific latent processes. Third, they also differ from the precise measure of attitude objects commonly used to assess constructs such as complexity. That being said, Wanberg and Banas (2000) explain how they function, rationalizing the distinct value of them. These constructs represent “proximal, context constructs” instead of traditional psychological dispositional variables, and are therefore more inclined to embody “interpersonal dynamics (2000, p. 134).” In attitude formation, the objects may contain relevant attributes, and the individual may contain relevant attributes as well. In between these lies the context, the messenger, the environment and the acts of management. This set focuses on that middle ground between object and individual.

As we investigate predictors of inconsistency, we will allude to the following chain of reasoning, which helps characterize the inferences necessary to link this unprecedented set of predictors to inconsistency (Figure 9). The solid-lined constructs reference those steps in the process that have clear empirical links between each other. For instance, our set of antecedents has previously been related to the attitude of

openness to change and to supportive behaviors. The reasons given for these extant relationships help us fill the gaps in our chain of effects. Sorting through the various discussions we see that they provide support for our reasoning: predictors create a setting for elaboration to occur, which then permits consistency to emerge.



We will study the following five antecedents: *participation, communication, structured procedure, managerial supportiveness, and supervisor supportiveness*. Regarding *participation*, numerous studies have demonstrated that the inclusion of individuals into the change process (i.e., active participation) reduces behavioral resistance (e.g., Giangreco & Pecci, 2005; Lines, 2004; Msweli-Mbanga & Potwana, 2006). Other studies have, more importantly, empirically linked participation to an attitude of *openness to change* (e.g., Miller Johnson, & Grau, 1994; Lines et al., 2005; Wanberg & Banas, 2000). Why should participation positively influence attitude? Participation, as a construct, describes the opportunities to influence and engage with the change initiative. In a weaker form, participation gives a voice to employees (Lines et al., 2005). Studies of participation offer the explanation and empirical support that suggests it could improve the consistency of attitudes as well. First, participation produces trust in management (Korsgaard & Robinson, 1995). Employees are likely to

reciprocate the trust by honestly engaging in the issue (Lines et al., 2005). This honest, active participation can increase understanding and internalization of the initiative. As a second explanation, participation also partially removes the delineation between management and employees. This may stimulate elaboration because it engenders ownership of the issues, vested interest, and commitment. Third, a new social identity in relationship to management may also reduce the saliency of possible conflicting values between subgroups (Turner, 1987). The suppression of possibly conflicting values might reduce the complexity of the task of attitude formation.

The work on *dissonance* underlies some of these interpretations and also yields an explanation that serves our inferential extension of participation's effects on consistency (Festinger, 1957). Dissonance theory belongs to the family of consistency theories discussed previously, but highlights the role of behavior as a causal force in creating consistency. It is well established in dissonance theory that one's actions can influence one's attitudes to be congruent with those actions (a reversal of the attitude-behavior causal paradigm). The "mental dissonance" experienced when attitude and behaviors are out of line force a transformation of attitude to reduce the bothersome experience of being in conflict with one's values. Dissonance theory espouses that the resolution of conflict works on the intra-attitudinal level as well. When feeling and cognitions are inconsistent, this requires resolution as well. Participation, because it induces a given behavior, triggers the process by which attitudes restructure themselves in support of these behaviors. Similarly, work on sensemaking theory suggests that actively interacting (participating) with an issue gives it meaning and structure (Stensaker & Falkenberg, 2007). Interaction with an issue activates schemas, in which individuals

develop the framework for understanding an issue, and therein resolve uncertainty and ambiguity regarding that issue (Balogun & Johnson, 2005). Such schema formation is an important tool in pedagogy. Sensemaking also give individuals the opportunity to develop the rationale to justify the transformation initiative to themselves (Maitlis, 2005). Therefore, participation, if it triggers such mental processes of dissonance resolution and sensemaking, may bring about specific attitudes and possibly well-structured attitudes. Also, in agreement with the ELM's understanding of schema, participation provides repetitive interaction with the object, which creates both opportunity to better understand this issue as well as motivation (Petty & Wegener, 1998). Participation, in short, sets up the conditions for elaboration.

Hypothesis 1a: Employee perceptions of their ability to actively participate in the formulating the change initiative will negatively relate to affective-cognitive inconsistency regarding the change initiative.

One can posit the role of *communication* in numerous ways. When a manager communicates, the message is supposed to cover a wide array of issues, including the justification for the change, the vision, the role of individuals, and the consequences (Aremankis et al., 1993). Lewis determined the perceived quality of the communication reduced resistance (2006). Wanberg and Banas identify that receiving communication from an authoritative source reduces resistance (2000). The same studies that have looked at participation's relationship to openness to change have investigated communication as well. Their explanations, as well as studies from other disciplines, permit us to link communication to the process of consistency.

We offer three different interpretations of how communication works in general.

At the most basic level, communication understood as mere *transmission* provides the information about the issue. Is this sufficient? After all, knowledge and experience have repeatedly failed to correlate to inconsistency (e.g., Chaiken & Baldwin, 1981; Prislin, 1996). Communication, especially in our context, is rarely just the transmission of information. It has the purpose (or should, according to Armenakis et al, 1993) of allowing employees to understand the personal importance and overall relevance of the change. Communication can have broad effects on the individual that are not immediately apparent from a transmission perspective. For instance, communication influences *affective* processing of that information, due to a reduction of anxiety (Wanberg & Banas, 2000). This could make the process of attitude formation less intimidating. In an environment of change that is typically described as anxious and uncertain (e.g., Lines at al., 2005), we probably cannot overestimate the affective role of good communication.

The second interpretation addresses the cognitive function of communication. Communication provides information that reduces uncertainty about the event (Miller, Johnson & Grau, 1994). This could reduce ambiguity which limits the chance of ambivalence (or inconsistency). The alternative of poor communication environment, moreover, is one where rumors and conflicting misinformation arises, which would inject complexity into the task sorting out an issue to form a consistent attitude. Communication, as a step above mere transmission, may provide sufficient justification to include it in a study of consistency, so long as it alleviates anxiety and helps interpret complex events. These would be important steps for the ELM.

The cognitive interpretation already has some association to attitude and inconsistency theory. The way communication frames the message touches upon the *saliency* of values, term repeatedly summoned to explain the conflict underlying inconsistency. Advocates of inconsistency have argued that saliency of contradictory values behind inconsistency is what moderates behavior, because it makes those contradictions more accessible during behavior (e.g., Fazio, 1987; Schleicher et al., 2004). How does communication relate to saliency? Communication make certain elements of the issue salient (Lines, 2005), and such saliency can govern which particular values are triggered in the formation of attitudes (Fiske & Tayler, 1991). One would expect that communication which addresses both pros and cons (but downplaying the cons) thereby provides the saliency for a direct argument or path toward a particular outcome. Therefore, information in a persuasive form may have the potential to reduce the appearance of contradictory object elements, and reduce the *saliency* of contradictions.

The ELM would caution us in retaining a myopic focus on cognitive effects such as saliency, however. Likely, the greater potential of communication to trigger consistency rests on both affective and cognitive elements, as well as a sense of participation and inclusion. Rosenberg concluded that communication could reduce inconsistency in so far as communication addresses the correct value set at play in attitudinal conflict (Rosenberg, 1968). The ELM would propose that communication would need to touch upon values and interests which have the potential to trigger motivation and interest. Given the diversity of personal values, these interpretations would suggest that the manipulation of salient issues may be a tricky and incomplete

means for communication to influence consistency. Communication may need to have influence beyond the alignment with exact values.

Communication may be able to summon broad effects of a sense of participation, inclusion and trust. One-way communication may be able do this, even if it is highly selective and partial, so long as the message is delivered in a certain way. Namely, work into “social accounts” reveals how selective messages can still trigger trust (Cobb & Wooton, 1998). Two-way communication more directly engenders a sense of trust and openness (Whitener, Brodt, Korsgaard, & Werner, 1998). Moreover, two-way communication benefits from the concepts of participation. Indeed, the literature regarding two-way communication and participation regularly discusses them as intertwined forces. To the previous discussion of participation, we would add that sensemaking occurs not just in the isolated mind of the individual but also in a social environment (Weick, 1995). Two-way communication (and even well-conceived one-way communication) may be perceived as an opportunity of sensemaking, an act of inclusion, or participation, whereby a joint understanding of the issue is created. Bovey and Hede (2001b), who call for an advanced and codified form of communication during organizational change, namely *intervention*, would appear to support a complex view of how communication can work, and may need to work to create attitude change.

Each of these interpretations permits us to justify including communication as a means to reduce inconsistency. However, this rationale also suggests that, if communication influences consistency, it likely shares a considerable multicollinearity with participation. Participation likely mediates the effects of communication on

consistency. Although this does not amount to a hypothesis, we will investigate this in the post hoc analysis.

Hypothesis 1b: Employee perceptions of the quality of communication about the transformational initiative will negatively relate to affective-cognitive inconsistency regarding the initiative.

Managerial supportiveness, supervisor supportiveness, and structured procedure round out the list of common constructs studied in organizational behavior. Numerous studies describe effects from these constructs that should foster attitudinal consistency among employees (Lines, 05). The process models, for example, reveal the importance of these in meeting important information processing needs. Individuals must understand the need for change, gauge the appropriateness, judge the efficacy of management, gauge the leadership commitment, and evaluate the personal relevance of the initiative (Armenakis & Harris, 2009). While communication addresses some of these steps (i.e., need for change), these managerial techniques address those of *efficacy* and *commitment*. It is believed these managerial constructs effect change in issues because they improve trust in managers (Oreg, 2006), reduce skepticism (Stanley et al., 2005), improve employee-manager relationship (Furst & Cable, 2008), improve the development climate (Van Dam et al., 2008), and increase perceived fairness (Lines, 2005). Managerial supportiveness (supportiveness) largely works because of the image and environment it fosters. It has the potential to instill trust, and to create confidence in the manager reliability and integrity (Van Dam et al, 2008). Research has demonstrated a variety of psychological effects produced by trust, revealing trust to be quite a pervasive

phenomenon (Dirks & Ferris, 2002). These positive attributes of environment, we posit, characterize an environment where elaboration may occur because conditions for motivation are improved. Cole et al. (2006) found that the quality of the change procedure increased job satisfaction and reduced role ambiguity. With a reduction of ambiguity, one should experience a reduction in ambivalence (or inconsistency). We feel such research directly supports our belief that pervasive efforts on behalf of management to create structure and to demonstrate managerial commitment and seriousness about the initiative may produce important conditions. These conditions stimulate elaboration.

These constructs all represent a qualitative component. An individual exposed to these techniques, one may infer, has received quality opportunity and motivation to engage with the issue. In the absence of these constructs, inconsistency would occur more frequently and to greater degrees.

Hypothesis 1c: Employee perceptions of the degree of structured procedures employed during organizational transformation will negatively relate to inconsistency towards the change initiative.

Hypothesis 1d: Employee perceptions of managerial supportiveness during organizational transformation will negatively relate to inconsistency towards the change initiative.

Hypothesis 1e: Employee perceptions of direct supervisor supportiveness during organizational transformation will negatively relate to inconsistency towards the change initiative.

Consistency as a Moderator

The ultimate reason to study attitudes, and the attributes of attitudes, lies in the ability of attitudes to predict behavior (Crano & Prislin, 2006). It is no surprise, therefore, that studies of inconsistent attitudes have focused on their ability to *moderate* the important attitude-behavior relationship. As expected, inconsistency has repeatedly revealed an attitude as ill-quipped to govern behavior. Namely, inconsistency weakens the predicted relationship. The body of literature that has directly employed inconsistency as a moderator is summarized in Table 2. Most of the above studies have measured inconsistency in more than one test, adding greater credence to the short list of publications.

Each study, with the exception of Fazio and Zanna, has found a significant effect for consistency. Individuals with high consistency reveal an attitude-behavior correlation in the range of .31 to .57. Individuals with low consistency reveal correlations from -.18 to .39, but tend towards a null correlation. Fazio and Zanna do not find significant results, though propose that the nature of their sample and questions, which were initially formed with a different moderator in mind, may have contributed to their non-significant finding.

Table 2: Evidence of Consistency as a Moderator								
Authors	Independent Variable	Dependent Variable	DV Type	Operation	Test Type	Signif?	A-B Correlation for High (Low) Consistency Cohort (r=)	
Norman (1975)	evaluaiton of participation in research	volunteering for psych study	overt	Rosenberg & Norman	median divide	yes	.51 (-.18) .53 (.26) .51 (.39) .44 (.15)	
Fazio & Zanna (1977)	evaluaiton of participation in research	volunteering for psych study	overt	Norman	regression	no		
Chaiken & Baldwin (1981)	environmentalism attitudes	Common ecology related activities	intentional	Rosenberg	median divide	yes	.398 (.068) .313 (.114)	
Franc (1999)	legalized abortion	numerous advocacy actions	intentional	Norman	median divide & regression	yes	.45 (.0)	
Schleicher, Watt, & Greguras (2004)	jobs satisfaction	performance	overt	Rosenberg	median divide, & regression	yes	.57 (-.03) .54 (-.11)	
Zhou (2010)	evaluation of department s	intention to shop at store	intentional	Rosenberg	median divide	yes	ANOVA	

Despite the near consensus that inconsistency moderates the attitude-behavior relationship, the body of literature contains four weaknesses: limited subject matter, measurement construct, test type, and operationalizaion. These weaknesses qualify the apparent consensus, and establish the need to check for moderation at this present opportunity.

Looking at the independent and dependent constructs, one sees that inconsistency has been applied to several different issues, ranging in profundity and potential breadth. Some include hot-button issues like abortion. Others appear rather innocuous, such as the issue of whether students would like to participate in a psychology study at the university. Overall, however, the findings do not cast a wide net across attitudinal issues. This is a distinct limitation of the research. Many decades of research have substantiated that attitude findings cannot be generalized across attitude domains or categories (Krosnick et al., 1993). Moreover, Rosenberg's own claim of domain specificity should

mandate diverse studies to be accomplished before substantial faith be placed on any broad implications of this construct. Politics, sports, religion, policy, family, work, entertainment, advertising – each of these could have different capacities to trigger inconsistency and attitudinal conflict. Ambivalence research has indeed taken the steps to explore a wide range of issues (e.g. Conner et al, 2003). Inconsistency has not. Therefore, seeking moderation into the realm of organizational transformation has important value of the field of inconsistency.

One also notices that half of the studies utilize *intended* behaviors, and the other half actual, observed, overt behaviors. Intended behaviors hold a less respected place in empirical literature, since differences emerge between stated intentions and what one actually follows through on (Sheppard, Hartwick, & Warshaw, 1988). Intended behaviors often serve as a convenient proxy when overt behaviors cannot be obtained (such as has been admitted in the Zhou et al. study, 2009). Surveying attitude and intended behaviors often *overinflates* the “attitude-behavior” correlation because people tend to respond artificially consistently on surveys. In this case, it may overestimate the true baseline, making a test of moderation easier to establish. The employment of direct measures of behavior would qualitatively add to the literature.

Lastly, the studies vary in the quality of their moderation method and their operationalization. Most of the publications have applied a median-split test to determine significance. That standard, though still common among strength variables (Krosnick & Petty, 1995), has lost some conviction within more statistically minded circles (Frazier, et al., 2004). Rosenberg’s operationalization, discussed previously, also must be viewed as a rough measure, better able to *categorize* than to precisely measure degrees of

inconsistency. His operationalization may have sufficed for this lower fidelity of testing. Thankfully, a few of these studies have applied both standards of moderation (Schleicher et al., 2004; Franc, 1999). However, much work still needs to be accomplished to reassess prior findings in light of more recent statistical standards, and more precise moderation measurement.

As a final assessment of the entire body of literature, we would conclude that without direct evidence to the contrary, our hypothesis would have to follow the trend of prior studies. If all other things were held constant, inconsistency should moderate the attitude towards organizational transformation.

Hypothesis 2: Inconsistency will moderate the relationship between the aggregated score of Opinion of Change and the Observed Support for Change, such that greater consistency will improve the correlations, and less consistency will degrade the correlations.

Despite this hypothesis, we approach moderation with some skepticism since numerous studies suggest that the attitude-behavior relationship in a workplace may not function well enough to permit moderation. Organizational change provides a specific new challenge for moderation. Will contextual factors such as financial remuneration, career goals, role responsibility, work culture, and social pressure influence the presence and function of inconsistency? One can imagine institutional pressures augmenting inconsistency, as conflicted allegiance between two identities. Or perhaps people compartmentalize an issue, and do not experience such cosmic identify conflict.

Unfortunately, such questions are not only beyond inconsistency theory at this time, also go beyond the scope of the data we have available. More importantly, these contextual factors likely influence the baseline attitude-behavior relationship which will, itself, create a practical barrier for finding moderation. For instance, attitudes may not manifest themselves in the same way when money is involved, as it would in a less consequential environment (e.g. Belcher & Atcheson, 1976). Moreover, formal organizations, such as the workplace, often institutionalize attitude and behavior, through a common understanding (Zucker, 1983). Also, the relationship between attitude and behavior is often changed by the groups in which individuals participate (Davis-Blake & Pfeffer, 1989). People function and behave differently across different organizations in which they may belong. All of these studies imply that the baseline attitude-behavior correlation may not occur as it would in the more pristine environments employed in inconsistency research. Dissonance theory would suggest attitude and behaviors will still correlate. But if these additional factors diminish the baseline relationship, moderation may be immeasurable.

Consistency as a Mediator

Within inconsistency studies, inconsistency appears to happen equally across the whole continuum of attitude extremity from positive to negative. No correlation between consistency and overall attitude polarity has emerged in any prior studies (e.g. Schleicher et al., 2004; Norman, 1975). Based on this body of knowledge, inconsistency is a global or pervasive phenomenon, not just towards the neutral attitude, or towards one or the

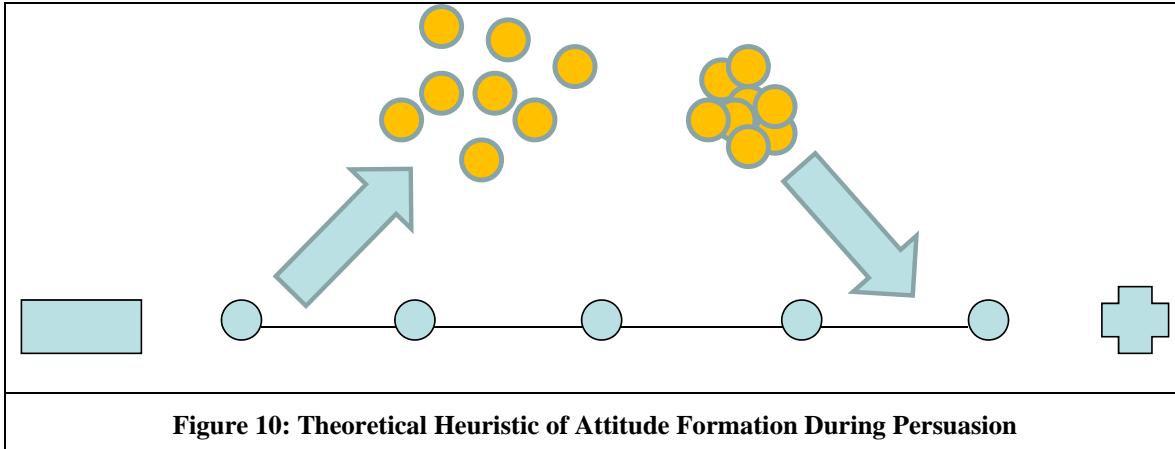
other valence. However, these studies have occurred in a rather unrealistic scenario of a neutral environment. In reality, attitudes generally do not function in a stable or neutral environment. Attitudes function in environments marked by messages with a purpose – to persuade, influence or convince. The published studies have, therefore, focused exclusively on the relative pristine possibility of attitude *formation*, and not on attitude *change*. These represent two separate endeavors (Crano & Prislin, 2006).

Should we expect equal likelihood of inconsistency when management techniques studied in our earlier test are present? Or, instead, will consistency occur more frequently in support of change, and inconsistency more frequently in resistant attitudes? The latter would suggest consistency would occur as part of attitude change. One might even infer that consistency occurs as a mediating step towards attitude change. As a unique contribution to inconsistency literature, our context and antecedent set permits us to truly investigate the possibility of mediation. As a contribution to resistance literature, the occurrence of a mediation process would convey the importance of reducing inconsistency in the process of organizational transformation.

Common belief, as seen in the ELM, is that consistency *does* play a mediating role for attitude change (e.g., Petty & Wegener, 1998; Crano & Prislin, 2006). Referring back to the general attitude change model (Figure 8), some process occurs in either the affective realm, cognitive, or intentional, which then – by virtue of the natural forces for consistency – affects the other respective forms of processing. Petty & Wegener have stated that almost every conceivable causal sequence of affect, cognition, and behavior has been proposed to account for attitudes in at least some circumstances (1998). For instance, within resistance research it has been determined that resistance can originate in

just cognitive or just affective reactions (e.g. Fuegen & Brehm, 2004). However, Petty & Wegener conclude that the accumulated literature makes it clear that although the affective, cognitive, and behavioral bases of attitudes can be independent (Zanna & Rempel, 1988), they are often inextricably interlinked just as the consistency theorists have proposed (e.g. Rosenberg, 1960). This logic would imply that effective persuasion, even if it employs mostly just a cognitive or just an emotional appeal, would nonetheless ultimately trigger consistency as a mediating step towards attitude change.

But why should consistency mediate the antecedent set of management techniques studied thus far? We suggest that persuasive management techniques such as participation, communication, and structured procedure not only permit elaboration, but also provide a vector. The provided information and context does not simply occur innocently in the way described in Rosenberg's research where mere exposure naturally triggers a realization of inconsistency. Instead, the information has been contrived to produce a *particular* reaction, a transformation of attitude towards a particular polarity. In the neutral scenario, information triggers a bout of inconsistency, which then gives way naturally to a crystallized structure (Rosenberg, 1968). In the latter, information in a *persuasive* form trigger the steps of inconsistency and then convergence, but also produce a shift from where convergence may have initially occurred based on pre-existing values (Figure 10). Persuasion alters the potential bounds in which convergence may occur.



Our explanation is consistent with Rosenberg's theory, but it is not complete.

Namely, Rosenberg's theory states that events can trigger heightened information processing and inconsistency, and then ultimately lead to consistency in a new state. Rosenberg is proposing two mediations in his theory. In two different stages of development, *inconsistency* (stage 1) and then *consistency* (stage 2) could mediate attitude change. With a single test measurement, we cannot say if any given individual should be in stage 1 or stage 2. However, individuals engaging in heightened information processing and still experiencing inconsistency should not yet have as positive of an overall attitude as those who have completed the information processing and crystallized an attitude. Stage 1 individuals should not have a positive relationship between consistency and overall attitude. After all, they may have had an initial attitude anywhere on the continuum when they started. In agreement with prior studies, inconsistency could happen anywhere. However, stage 2 individuals should reveal the proposed positive correlation between consistency and attitude. At that stage, a shifted form of crystallization should have occurred.

With a single test of mediation, we will not be able provide support for both stages of this explanation. Nor, do we have sufficient theory to try to decipher with other variables, who is in which stage at the time of our test. That would require a multi-test format, or a panel study. Instead, we expect to capture the stage 2 individuals, and hope their presence is sufficiently robust to provide a mediation effect. In reality, given the presence of two cohorts, we would not expect that relationship between consistency and attitude to be strong, since the stage 1 individual would work as a suppressor is in the data. Nonetheless, we make the following hypotheses:

Hypothesis 3: Consistency will positively relate to overall attitude measure of openness to change.

Hypothesis 4a: Consistency will partially mediate the relationship between participation and the attitude of openness to change.

Hypothesis 4b: Consistency will partially mediate the relationship between communication and the attitude of openness to change.

Hypothesis 4c: Consistency will partially mediate the relationship between structured procedure and the attitude of openness to change.

Hypothesis 4d: Consistency will partially mediate the relationship between managerial supportiveness and the attitude of openness to change.

Hypothesis 4e: Consistency will partially mediate the relationship between supervisor supportiveness and the attitude of openness to change.

With Hypotheses 1a-1e, as well as Hypotheses 3 and 4, we have proposed necessary relationships for three of the four paths for mediation. We do not make the hypothesis for the necessary fourth path that manager techniques correlate to attitude. Since all of these constructs have demonstrated a relationship to openness to change in the past (e.g., Wanberg, & Banas, 2000), we accept those results and feel their relationship to attitude provides no new contribution to literature.

Summary

Determining the differential capacity of organizations to adapt to exogenous influences remains a primary concern of resistance studies (Bercovitz & Feldman, 2008). The inclusion of inconsistency adds to the aim to differentiate seemingly similar individuals and thus seemingly similar organizations along finer psychological detail. However, in reviewing the literature, it is clear that the current state of research regarding inconsistency cannot provide guidance or empirical support for all the steps of the attitude process, from the antecedents of inception to the functional effects on behavior. These gaps are both empirical and, due to the age and neglect of the original constructs, even theoretical. Prior studies have failed to synthesize more contemporary studies to strengthen the core concepts. As such, we expanded this literature review to cover those new advances. We structure the methodology in the same spirit – to directly address prior methodological weaknesses. While some of these should improve our tests, other standards (i.e., multiple regression) have the potential to reveal the existing weakness of the model and theory. A succinct affirmation of those methodological choices, in line with the previous discussion, ensues.

III. Methodology

Test Subjects

We employed archival data from government employees of a particular state whose departments had recently begun an organizational transformational initiative. A broad survey had been conducted to determine the factors of resistance towards an initiative consisting of a new quality control process. We identified the level of change as a beta or gamma change consistent with the literature.

Of the 759 employees in these departments, 436 responded with usable surveys. For our analysis, however, the measure of behavior proved to be a limiting factor to data analysis. Supervisors provide responses to only 177 of their subordinates. Similarly, most of the supervisors themselves were not assessed on this measure, presumably because they did not have immediate supervisors included in this survey. Of the 177 responses to the behavioral measure, we were only able to apply analysis for all three tests to 145 individuals, given omissions in some of the other variables. No regularity appears in the nature of these omissions. We conclude they were random omissions to test items.

To ensure supervisors had not selected only to measure employees with significant differences from the entire population, we applied t-tests to common dispositional traits of age, gender, education, time in position, and time employed (Appendix B). The descriptives are summarized in Table 3. We also applied t-tests for overall attitude and

inconsistency, the main subject of our study. None of the t- tests proved a significant difference between the usable sample and the entire population of respondents, with the exception of gender. Males comprised 70% of the population, but only 60% of our sample of 145 individuals. This is a limitation of our analysis, although no prior tests of consistency have found gender to be a relevant variable. Reassuring are the t-tests for attitude and inconsistency. Of all the variables, they revealed the *least* likelihood of Type I and Type II errors, giving us confidence that the sample is representative of the whole population for the purposes of our study.

Table 3: Descriptive Statistics of Sample	
Variable (N)	Mean
Age N = 132	47.64 years
Time in Position N = 135	5.12 years
Time as Employee N = 138	12.28 years
Attitude N = 145	63.33
Inconsistency N = 145	.459
Education	College graduate
Gender N = 139	60% male

Measures

All variables used a 5-pt Likert-scale, ranging from strongly disagree to strongly agree. The antecedents to inconsistency included *participation, communication, structured procedure, department level leadership supportiveness, and supervisor effectiveness*. All antecedent tools have previously been validated (Wanberg & Banas,

2000). All variables employed *subjective* measures from the respondents regarding the actions taken by management and supervisors. The full list of test items is in Appendix A.

The *participation* variable comprised 4 items, Cronbach alpha = .90. The variable includes questions such as “I have been able to ask questions about the changes at work before they were implemented,” and, “I have had some control over implementing changes at work.” The *communication* variable consisted of 5 items regarding the timeliness, usefulness, and adequacy of information, as well as the availability of two-way communication opportunities, Cronbach alpha = .92. The *structured procedure* variable consisted of 6 questions, Cronbach alpha = .86. The intent of these questions was to assess the degree to which the transformation activities involved a defined process, which would include program management approach, metrics, and follow-up efforts. Both the *managerial supportiveness* and *supervisor supportiveness* variables consisted of 3 questions focusing on whether their respective level of leadership had led, united the employees, and provided necessary resources, Cronbach alpha = .92 and .95, respectively.

The behavioral variable consisted of a 3 item measure posed to direct supervisors of employees, Cronbach alpha = .95. These questions asked the supervisor to assess the employee on positive attitude, commitment, and overt support. Although attitude and commitment generally are treated as latent constructs, by asking supervisors to assess these latent constructs, we effectively ask them to infer them based on physical, outward mannerisms, actions, or statements. In the end, all three become measures of overt behavior (Eagly & Chaiken, 2007), but require the supervisor to employ different shades

of assessment and reasoning. The nature of this variable likely contributed to the low response from employers. First, practical limitations may have presented themselves for supervisors to have felt comfortable assessing commitment and attitude. Assessing commitment and attitude may have appeared too vague or untenable for less proximal employees. Again, ANOVA techniques have not identified any particular difference between those assessed and not assessed. However, the list of variables for ANOVA analysis is finite, and relevant distinguishing variables may not have been available. For example, a clear implication of the way behavior was measured is that employers are poorly represented, though not completely excluded from the analysis. This behavioral variable remains a weakness of the study.

For an attitudinal measure of *openness to change*, we employed a previously validated 18-item tool, Cronbach alpha = .95. Openness to Change has been determined to be an important attitude in support of change (e.g., Herscovitch & Meyer, 2002; Miller et al., 1994; Wanberg, & Banas, 2000; Van Dam et al, 2008). Applying factor analysis in SPSS® we confirmed the presence of two distinct factors of 6 items each. The two-factor model demonstrated a good fit to the data. Applying AMOS, the NFI, IFI, and CFI scores were .989, .992, and .992 respectively. And RMSEA was .060. We call one factor the *affective* scale (Cronbach alpha = .89), and the other the *cognitive* scale (Cronbach alpha = .93). The affective scale consisted of questions 2, 3, 5, 6, 14, and 17 from the set in Appendix A. The cognitive scale consisted of questions 7, 8, 9, 11, 13, and 15 from that set. Each scale serves as our distinct inputs for a measure of affective-cognitive consistency. The overall measure of attitude retains all 18 questions to create a overall summation.

To measure *affective-cognitive consistency*, we turn to Norman's (1975) proposed a modification to Rosenberg's initial operationalization. Norman attempted to correct for the potential of extreme or erratic ranking scores from Rosenberg's competitive-based ranking method. Norman's measure determines the normalized deviation from the mean on each component (scale), and then takes the absolute value of their difference. A +.5 standard deviation on one scale and a +.3 on the other would create an inconsistency score of .2. In that case, the respondent was above the mean on one scale more than on the other, and this would constitute inconsistency. If the scores were a +.4 and -.2, then that inconsistency score would be .6, having crossed from positive to negative attitude. A *smaller score means greater consistency*. To avoid confusion, we regularly refer to this variable as "inconsistency", since a larger score equates to more inconsistency.

We follow a more contemporary approach and make an additional change to the tool employed by Rosenberg. Rosenberg applied a measurement device based on the concept of *expectancy-value* (Fishbein, 1963; Scott, 1969; Rosenberg, 1956). He held the opinion that individuals form attitude based on assessing the *discrete* attributes of an object. Therefore, Rosenberg identified probable discrete attributes. The individual would assess the value of these discrete attributes (i.e., useful, rewarding, challenging). Thereafter, the individual would assess the potential of the issue to either *permit* or *block* the realization of those attributes. This approach requires a very deliberate process of psychological assessing the issue. It would appear on the surface to evoke a detailed assessment of a person's attitude. However, this approach has been doubted (Chaiken et al., 1995). Namely, the process requires an assumption that the chosen set of attributes represents the entire attitude toward the issue. It assumes one can generalize from the

finite select set to the whole attitude. This has not been demonstrated to be the case except for some tangential studies recently conducted by Van Hareveld and Van der Pligt (2004). Rosenberg and others have favored this interpretation. However, this method does not constitute the common approach to measuring attitude at the present time. Moreover, one could make the claim that the extra mental effort required to conceive of an issue based on value and instrumentality makes the tool cognitively biased (Eagly et al., 1994). The measure does, in fact, stem from a period in which cognitive consistency occupied studies of attitude, and when affect held far less interest (Chaiken et al., 1995). This same criticism of a cognitive bias has been levied towards the dual semantic-differential approach of ambivalence, which bears a similarity (McGregor, et al., 1999). Towards ambivalence, an additional criticism has been raised that one may be able to compartmentalize certain values and not have them actually inform attitude (Breckler, 1994). One might say the same of Rosenberg's expectancy-value as well.

Chaiken et al. (1995) have suggested that a less restrictive, and by extension less cognitively biased, measure should accomplish the goal of inconsistency research as well. Tests of less formalized measures have successfully produced results in consonance with the more formal measure (e.g., Chaiken & Baldwin, 1981; Chaiken & Yates, 1985; Schleicher et al., 2004; Zhou et al., 2009.) Recently, Schleicher et al. (2004) even determined that a question set that merely *tended* towards affect, and another that *tended* towards cognitive would produce significant results. We continue in this latter tradition.

We use the factor loadings of a traditional attitudinal measure. These items do not use expectancy-value. Instead, they aim to measure general component-based attitude. Items include, "The changes frustrate me," "I look forward to such changes,"

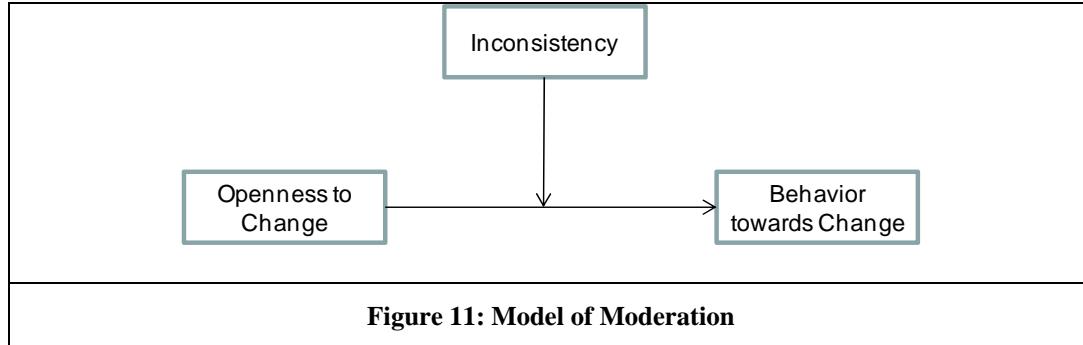
“The changes will benefit my organization,” and, “I find going through the changes pleasing.” Although certain values are imbedded in these items, they are general in nature. Moreover, the test does not then separately ask the individual to measure how much the issue may actively inhibit those personal values. This tool captures general attitudinal sentiment, with components loading, or tending, towards certain latent factors (Schleicher et al., 2004).

Tests

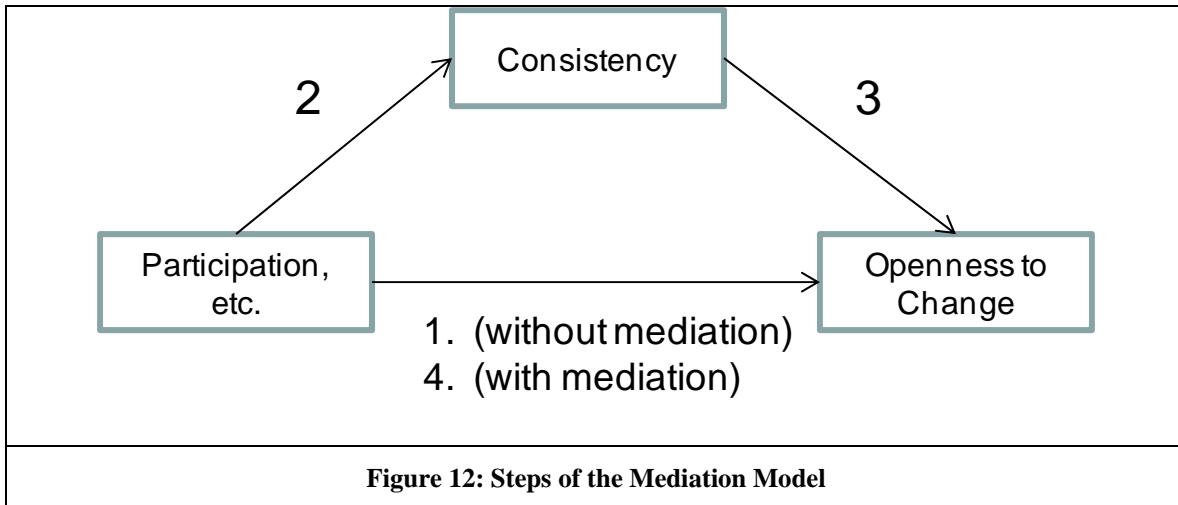
For test of correlation, mediation, and moderation we employ standard regression techniques (Frazier et al., 2004) using the statistical software package JMP®. For studying the relationship between antecedents and inconsistency (Hypothesis 1a-1e), we will employ an X by Y linear (bivariate) correlation. We set .05 as the significant confidence level of the test.

For *moderation* (Hypothesis 2) we employ a multiple regression approach. As previously mentioned, most have employed a median-split analysis whereby those with above median consistency have their behavior regressed on attitude, and the same is done separately for those with below median consistency. This traditional approach treats the entire population as two separate cohorts. However, from a statistical perspective, regression procedures are preferred over using artificial cut points because the latter leads to a loss of information, and to either Type I or Type II errors (Frazier et al., 2004). In multiple regression analysis, both the predictor and the moderator are entered as X-variables versus the Y-variable of the outcome. Then the product terms of the predictors and moderator are entered as an X-variable. If the product term is significant, then a

moderation exists. Openness to Change would be nonlinearly related to behavior toward change, depending on the level of inconsistency (Figure 11).



For *mediation* (Hypotheses 4a-4e) we use a four step regression approach developed by Kenny and colleagues (e.g., Baron & Kenny, 1986). It is considered the most common means (MacKinnon, Lockwood, Hoffmann, West, & Sheets, 2002). The first step is to show a significant relationship between the predictor and the outcome. Previous studies have demonstrated that all of our antecedents should correlate to attitude. The second step is to show that the predictor is related to the mediator. The results of this will come from our prior test of antecedents (Hypotheses 1a-1e). The third step is to show that the mediator is related to the outcome variable (Hypothesis 3). The fourth step is to show that the strength between the predictor and the outcome is reduced when the mediator is included (Frazier et al, 2004). Based on the arguments necessary for causality, one may infer mediation if the beta of the original predictor-outcome relationship is reduced in the presence the mediator. Figure 12 represents these steps.



IV. Results

Correlation

Hypothesis 1a through Hypothesis 1e predicted that given variables of the employee's management quality would predict the level of inconsistency the individual experiences. To test these hypotheses we employed simple linear (bivariate) regression. We regressed inconsistency on a set of five variables related to management: participation (1a), communication (1b), structured procedure (1c), managerial supportiveness (1d), and leadership supportiveness (1e). In support of Hypotheses 1a-1e, each of the antecedents individually reveals a significant negative correlation to inconsistency (Appendix C). Table 4 shows the correlation matrix between the variables employed in each of our tests. No hypothesis was made regarding the interrelationships or collinearity of the predictors themselves. To serve as an example of the variance pattern and fit line, we have provided a graph of participation, the patterns of which appear highly representative of all five (Figure 13).

Table 4: Correlation Matrix								
	Openness to Change	Behavior to Change	Inconsistency	Participation	Communication	Structured Procedure	Managerial supportiveness	Supervisory Effectiveness
Openness to Change	(.95)							
Behavior to Change	.309**	(.95)						
Inconsistency	-.247**	.042	N/A					
Participation	.599**	.319**	-.275**	(.90)				
Communication	.595**	.294**	-.266**	.748**	(.92)			
Structured Procedure	.468**	.117	-.319**	.479**	.700**	(.86)		
Managerial supportiveness	.577**	.221**	-.296**	.595**	.750**	.737**	(.92)	
Supervisor Effectiveness	.387**	.175*	-.230**	.405**	.459**	.457**	.612**	(.95)

**. Correlation is significant at the .01 level (2 tailed).
 *. Correlation is significant at the .05 level (2 tailed).
 N/A. Cronbach alpha is not applicable to this measure.

Hypothesis 3 predicted that inconsistency would negatively relate to the overall attitude of *openness to change*. We tested this as a simple linear regression between inconsistency, as a predictor, and openness to change, as the outcome variable. In support of this hypothesis, the test shows that inconsistency negatively relates to openness to change ($r = -.247$, $p < .01$). This result is the same as stating that consistency positively relates to overall attitude. Figure 14 depicts the regression line.

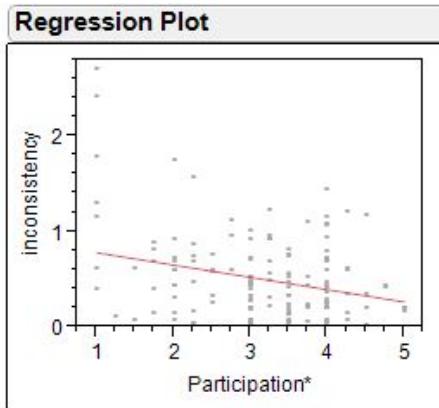


Figure 13: Correlation of Participation to Inconsistency

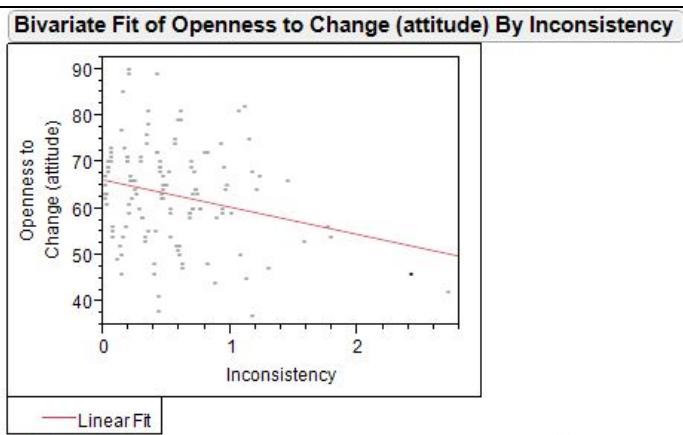


Figure 14: Correlation of Inconsistency to Openness to Change

Mediation

Hypothesis 4a through 4e predicted that consistency would mediate the relationship between a set of predictors and the attitudinal outcome of openness to change. Those predictors were the same as in the previous tests: participation (1a), communication (1b), structured procedure (1c), managerial supportiveness (1d), and

leadership supportiveness (1e). Consistency shows significant mediating effects for all five antecedents that we tested.

To determine mediation, we followed the 4-step procedure outlined by Baron and Kenny (1986). The first three steps employ bivariate regression. The determining relationship employs a multivariate regression. For hypothesis 4a, we first showed the relationship between participation and openness to change. Second, we showed that the participation is related to consistency. The test for Hypothesis 1a demonstrated this relationship. Third, we showed that consistency is related to openness to change. The test of Hypothesis 3 demonstrated this. Fourth, we regressed the outcome, openness to change, to the additive multivariate form (participation and consistency). This last step reveals the relationship of the predictor in the presence of the mediator. If beta is lower in this controlled model than in the baseline model (step 1), mediation has occurred.

Figure 15 shows the significant findings for participation. Figures 15 through 19 convey the same message that our antecedents were mediated by consistency. The original correlations for inconsistency have been reversed and the term consistency has been applied to better convey the nature of the hypothesis.

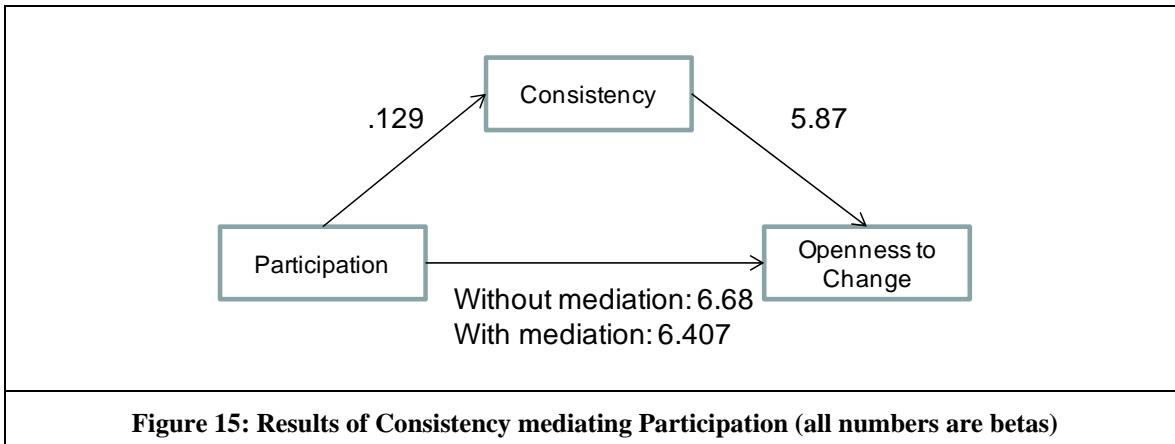


Figure 15: Results of Consistency mediating Participation (all numbers are betas)

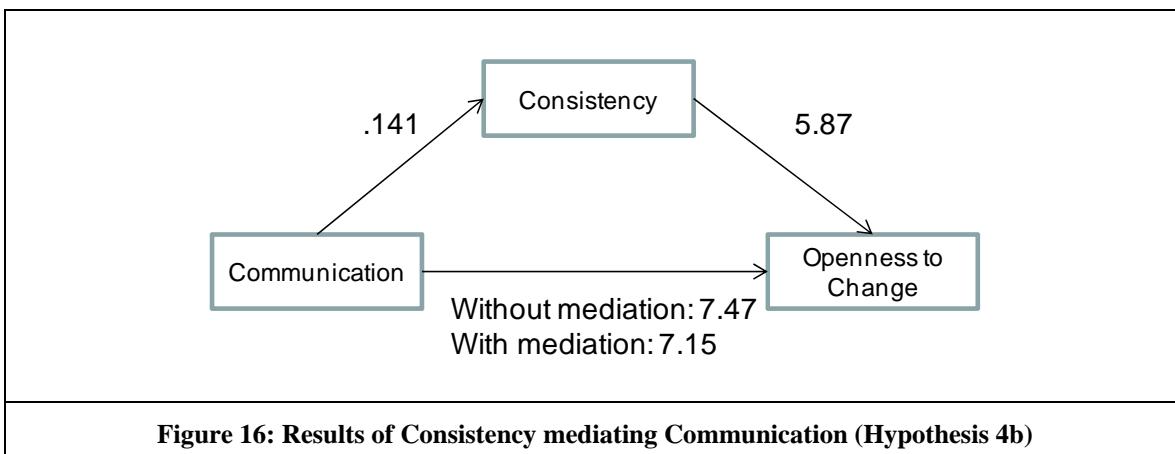


Figure 16: Results of Consistency mediating Communication (Hypothesis 4b)

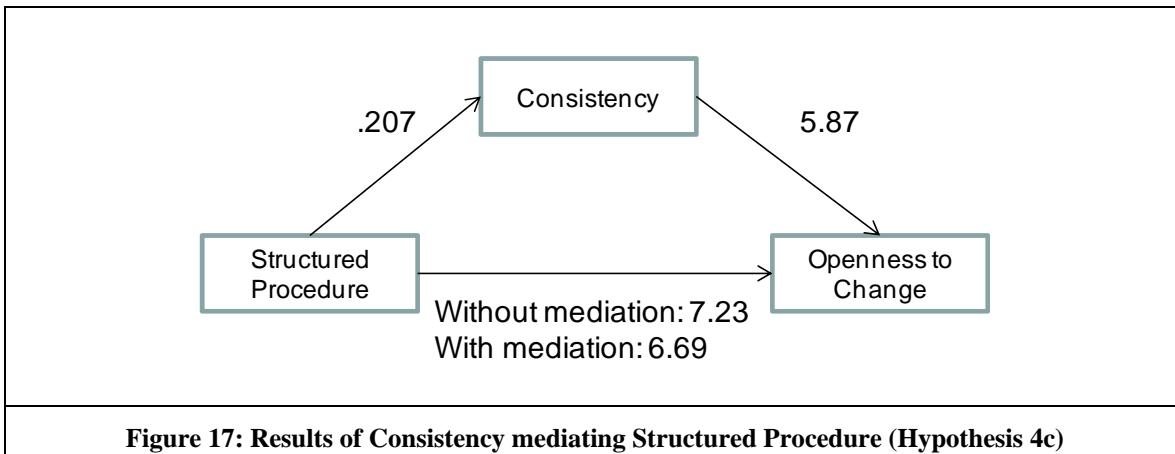
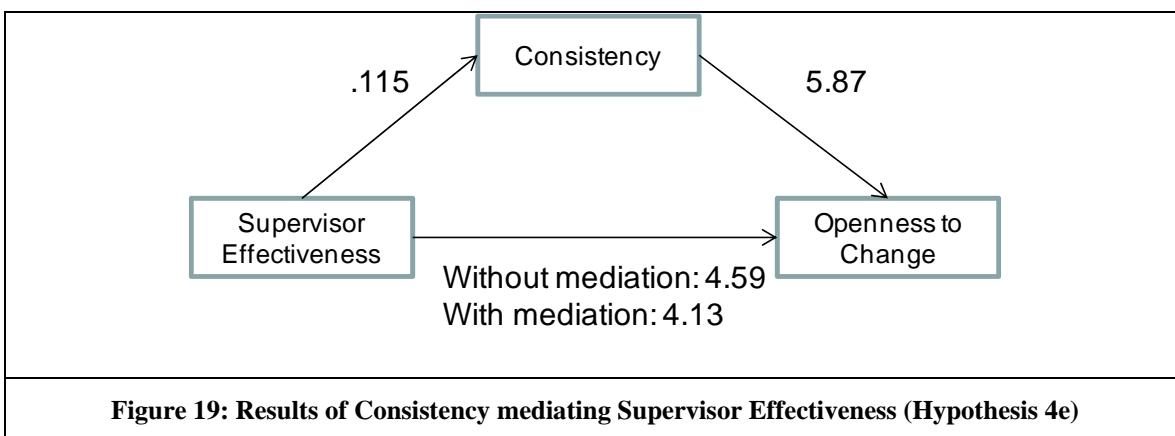
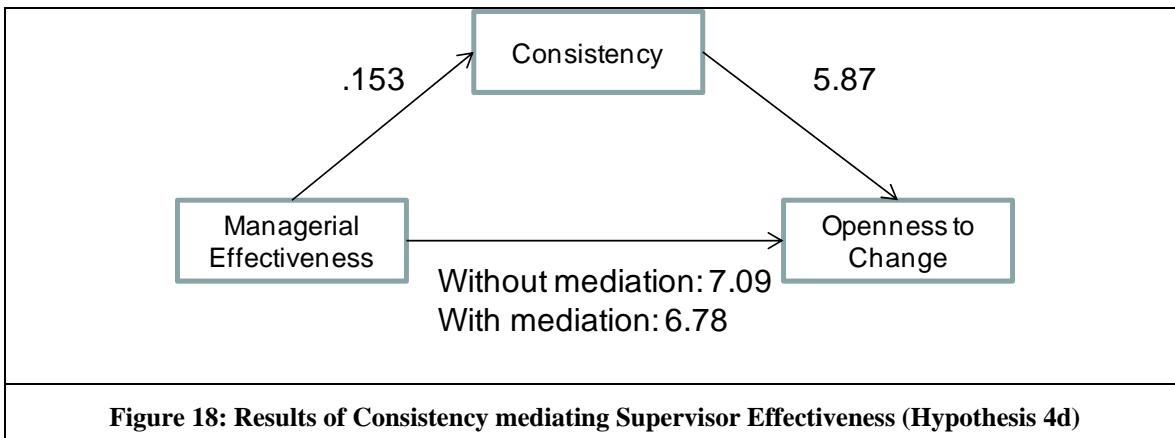


Figure 17: Results of Consistency mediating Structured Procedure (Hypothesis 4c)



Moderation

Hypothesis 2 predicted that inconsistency would moderate the relationship between attitude and behavior. The interaction term is defined as the product of attitude and inconsistency. The test of moderation requires a single regression run in which we insert the individual variables of attitude and inconsistency, and then the product term of attitude and inconsistency (Frazier et al, 2004). The test is significant for moderation if the product term is significant. The baseline relationship between attitude and behavior

in our sample is $r = .30$. We predicted that we would improve that relationship. The test did not prove significant (Table 5)

Table 5: Results of Moderation Test				
Parameter Estimates				
Term	Estimate	Std Error	t Ratio	Prob> t
Intercept	2.3984368	0.36659	6.54	<.0001*
Openness to Change (attitude)	0.022203	0.005384	4.12	<.0001*
inconsistency	0.228395	0.147574	1.55	0.1239
(Openness to Change (attitude)-63.3379)*(inconsistency-0.50837)	0.0048286	0.010773	0.45	0.6547

V. Conclusions and Recommendations

Conclusions of Research

Predictors of Inconsistency

The present study reveals that inconsistency, as a parsimonious construct of conflicting evaluations, occurs in the face of organizational change. More importantly, we have learned that it does not present itself randomly or inexplicably within the population, but rather persists relative to contextual factors. Each of our intended antecedents proved significant (range, $r = -.23$ to $-.32$). As that they each constituted subjective evaluations of management, the correlation can be expressed as such: the perceived quality of managers' and supervisors' actions in leading organizational change related negatively to the presence of internal conflict. Alternatively, one can say that those who experience consistency also appreciated these general activities by management more than those who were inconsistent. This was true for all five variables:

participation, communication, structured procedure, managerial supportiveness, and supervisor effectiveness.

In our literature review, we spent the greatest effort to justify the inclusion of *communication* in our study. The inclusion of all of our variables rested largely on their probable ability to foster elaboration. Communication as a mere transmission of information, however, would appear inadequate to the task of creating elaboration if motivation is not already present. That being said, we had contemplated a more complex mental effect for communication. We suggested that communication created a sense of participation, and therefore functioned within the Elaboration Likelihood Model by providing not just information, but also a sense of motivation that is common during participation. The strong correlation to participation (in fact the strongest of our set, $r = .74$) implies a germane interrelationship. A test a mediation analysis reveals that communication does, in part, influence consistency *because* of its fostering a sense of participation. Participation mediates communication rather strongly (beta reduced from -.14 to -.07).

Admittedly, not all communication necessarily should create a sense of participation. Our variable asked about timeliness, usefulness, comprehensibility, and adequacy. Additional components of communications could also prove important. Our test is not a detailed analysis of communication. It permits merely broad statements. Therefore, we suggest that managers should consider the quality and purpose of their communication carefully. Some aspects of it, roughly hewn by the individual test items in our measure, are capable of producing a sense of participation. In our study, this sense

of participation proved to be quite important for mediating its effects on attitude formation.

Communication, much as the other variables we employed, remains a broadly defined variable. These measures do rest upon a familiar set of discrete acts by managers: communicating the value and purpose of initiatives, showing commitment with resources, striving for unity, providing clear guidance and standards, and incorporating reviews. While we have not teased out these test items as separately significant, their itemization here puts into perspective what employees have had to consider in evaluating these broadly defined variables. It serves as a reminder to managers of what discrete acts may have worked in unison to provide our results. However, our own purposes direct us not to provide a cleaner delineation of each variable, nor to understand their inner dynamics. Instead, having successfully demonstrated their hypothesized relationship to inconsistency, we are interested in finding evidence in the results that will validate the reasoning that led to that hypothesis. The reasoning required considerable theoretical excursions, and inferential relationships. In this analysis, we therefore do not look inward at the variables but now focus outward on their interrelationships with each other, and with other concepts alluded to in the literature review.

The interesting relationship between communication and participation represents the first of several possible interrelationships between our variables which more convincingly demonstrates that our initial association of them with inconsistency may, indeed, have something to do with elaboration. A closer look will permit us to better make a claim of causality to inconsistency, which until now rests on logic and inference.

As a reminder, in our literature review, we hypothesized that these measures of *situational* qualities provide the needed *setting* for consistent attitudes to emerge. Our justification rested on the principles of the Elaboration-Likelihood Model. The ELM establishes that both *opportunity* and *motivation* must be available for important information-processing acts to transpire. To be clear, our causal logic lies on two fragile premises. First, we chose our antecedent set because we felt they captured the twin dynamics of the ELM. Unfortunately, the ELM has not previously been theorized to relate to our antecedent set. We alone have established the plausibility of that link. Second, the twin effects of opportunity and motivations have not even been previously tested for an empirical link to consistency. We have suggested that sheer historical oversight is to blame for this. Nonetheless, if our ultimate end was to establish that the ELM is definitely at work (and that causality can be inferred by association with such a strongly evidenced concept), we only have proxies and inference at our disposal. Our extensive literature review attempted to provide the logic for those inferences. In following the guidance by important voices within the attitude community, like Eagly (1992), who have called for bolder cross-paradigmatic investigations, we have not hesitated to make those inferential leaps between findings that have remained formerly unrelated, or which speak a different language. But we have struck out on our own path here. Our hypothesis inserts several mediating steps: a vague notion of conditions, as well as elaboration which responds to those conditions. Figure 20 reveals the chain of causality we have inferred. The ultimate test of our inferences lies with future studies. However, in the present study we apply post hoc analysis of our results to see what within those results may already support this proposed chain of causality.

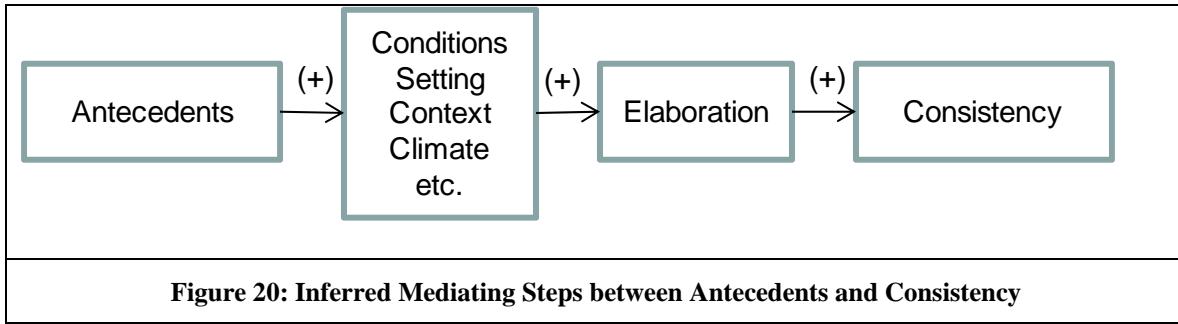


Figure 20: Inferred Mediating Steps between Antecedents and Consistency

Our *post hoc* analysis begins with the different strengths of the individual correlations in our study. Several interesting interrelationships in our results add greater support for our passing evocation of terms like climate, environment, and conditions. As a first exploration of their interrelationships we combined all five predictors in a multivariate relationship to inconsistency. Table 6 shows the results. From this analysis, we see that *structured procedure* dominates the others in effectiveness. With 5 separate variables present which we have purported to function in a similar manner, the strength of the structural procedure – even at only a .10 confidence level – shows a considerable distinctive contribution relative to the others.

To continue with the comparative analysis, we then removed structured procedure, and reviewed the results again. Doing this step by step, removing the strongest remaining variable each time, we produced a rough sense of the dominance of each variable in a crowded influential space. The second most significant of these variables would be a rough tie between participation and managerial supportiveness, which tend to crowd each other out at $t < .21$. Removing these, communication comes into its glory ($t < .0258$) even in the presence of supervisor effectiveness, which appears least

significant of these variables. Emerging from this picture is a hierarchy which we will explore more closely.

Table 6: Multivariate Model of Predictors of Inconsistency					
Parameter Estimates					
Term	Estimate	Std Error	t Ratio	Prob> t	
Intercept	1.3167364	0.193918	6.79	<.0001*	
Participation*	-0.08606	0.056983	-1.51	0.1332	
Communication*	0.0558476	0.082119	0.68	0.4976	
Structured Procedure*	-0.153246	0.081473	-1.88	0.0621	
Managerial Effectiveness*	-0.027553	0.076175	-0.36	0.7181	
Supervisor Effectiveness*	-0.031921	0.05011	-0.64	0.5252	

Looking at the individual strengths of these variables (i.e., in isolation) reveals a similar sense of hierarchy. The strength of these effects ranges from .23 for *leadership supportiveness* to .32 for *structured procedure*. *Managerial supportiveness* came in a close second. *Participation* and *communication* produced identical correlations in the middle of the pack. This is roughly the same picture that emerged from our multivariate analysis. We must exercise caution, however, and not treat this hierarchy as hard and fast. We consider them notional and approximate. First, each variable was produced based on a different number of test items. Therefore, the fact that *structured change* produced the strongest effect may be because it was created with the most test items. More test items permit finer details (Petty & Krosnick, 1989; Frazier et al., 2004). Similarly, the identical effects of *participation* and *communication* likely are not identical because communication required 5 questions to achieve those results, while participation required only 4. Lastly, *managerial supportiveness*, which was second strongest, had a

correlation of .30 and required only 3 test items to produce that. All things equal, that may have proven to be the most significant of the findings. The results, in the end, are not normalized such that we could make hard comparisons.

Still, we must point out that the two variables that appear the strongest in both multivariate and univariate analysis show some resemblance in two ways. Both resemblances logically explain their supremacy within the pack, and help us to evolve our understanding of these variables relative to inconsistency. The two variables that appear strongest are *structured procedure* and *managerial supportiveness*. First, structured procedure and managerial supportiveness both relate to *top level* aspects of the initiative. They speak to the institution, and to acts that can only be related to institutional order. The top-level variables we employed are the ones that should be most completely able to send messages about efforts at the institutional level that addresses the *entire* initiative. They convey a consistent message across the whole department that a strong, cohesive plan exists. They convey that management has put money where their mouth is. They convey unity of effort. Alternatively, *participation* and *communication* were not worded in a way to summon a direct assessment of management. They read, “I have been able to ask...” and “I have received...”. They do not directly implicate a particular communicator agent and entity, and likely summon more salient or proximal organizational structures (the chain of command) rather than the top level of the organization. The difference between the top two and the lower-level variables may be summarized as such: it is one thing to hear about commitment and purpose, it is another to witness it in an institutional structure. Top-level variables instill faith and trust

through demonstration; lower-level variables do so through communication, inclusion, and more proximal relationships.

The differences between top-level and lower-level variables may be particularly apparent in comparing *managerial (department-level) effectiveness* and *supervisor effectiveness*. Both are 3 item measures, and are based on the identical question stems. One is top-level, the other proximal. Feeling they are the most normalized of the variables, their results differ enough to consider their differences as significant and meaningful, rather than occurring through random error ($r = .23$ versus $.30$). We conclude, therefore, that the perceived hierarchy is not arbitrary, but meaningful in its own right. Such findings speak of the value of a *pervasiveness* of influence necessary to foster well-structured attitudes, the kind of *pervasiveness* that occurs when a well-defined environment or culture exists.

Structured procedure and *management effectiveness* share a second common feature. Not only are they top level, but they are more encompassing constructs. Although neither directly asks about communication and participation, neither can be assessed positively without those having happened. A member cannot become aware of metrics, program management activity, and resource availability without communication having taken place and without having had to interact with the initiative. A high correlation between *structured procedure* and *communication* seems to support that idea that when structured procedure has taken place, so has communication ($r = .70$). A high correlation between *management effectiveness* and *communication* draws the same conclusion ($r = .74$). The two top-level variables may therefore be more *inclusive* of other the influences in the environment. A certain logic permeates Table 6. The most

interrelated of the variables are *managerial supportiveness*, *structured procedure* and *communication*. Participation and supervisor effectiveness are less interrelated to the other variables. A quick mediation test provides additional support for this belief. Communication and Participation partially mediate the influence of structured procedure on inconsistency (beta falls from -.20 to -.16 and -.15 respectively.) Managerial supportiveness is similarly mediated (or explained) by these two more discrete measures (beta falls from -.15 to -.05 and -.10 respectively.) The top level variables partially work through the more discrete variables we tested. The top level variables appear to have a stronger influence because they subsume the influences of more discrete managerial acts within them. They are broader contextual variables. They offer more to an individual to be able to strike upon elaboration.

Table 7: Correlations among Antecedents					
	Participation	Communication	Structured Procedure	Managerial supportiveness	Supervisor Effectiveness
Participation	1	.748	.479	.595	.405
Communication	.748	1	.700	.750	.459
Structured Procedure	.479	.700	1	.737	.457
Managerial supportiveness	.595	.750	.737	1	.612
Supervisor Effectiveness	.405	.459	.457	.612	1

We have tried to be cautious with a *post-hoc* analysis. Each of the pictures, however, tends to draw the same conclusions. They each appear to be snapshots of the same overarching relationship. The data appears amenable to the large leaps of inference we took in proposing that our antecedents would function via the ELM. None of these snapshots is conclusive, but each one further hints at broad environmental effects that

foster the motivation to engage in elaboration. While they may hint at environment or culture, we had other *post hoc* tests at our disposal which may more firmly establish that link.

We applied two sets of tests. First, a selective additive multiple-regression test would determine if the more discrete variables can amass to mimic what the broader variables are able to accomplish. In short, we are looking for the non-redundancies. Prior studies have not tested multiple regression, and may have missed these potential effects. From a holistic perspective, discrete conditions should amass to create an even more conducive environment. Our tests support this thinking, but only at a .10 confidence level. *Participation + supervisor effectiveness* are significant at this level. Also, despite the strong correlations already mentioned, *participation + structured procedure* work together at a .10 confidence level. Although the data is inconclusive as a test, the fact that the *least related* of the variables came closest suggests that different variables with less preexisting multicollinearity may have revealed additive effects. Actions from managers may very well add up to foster an environment conducive to elaboration.

The second test is much more conclusive. We tested whether certain plausible *culture types* would mediate our antecedent set (Appendix D). This is a direct test of the first inferential leap of Figure 20. We turned to a simple measure of culture validated by O'Reilly (1991). This 7 item measure seeks to distinguish employees' perceptions of the prevailing culture, along such options as *risk taking, attention to details, outcome orientation, people orientation, team orientation, aggressiveness, and stability*. We had initially dismissed using this test and exploring culture as an antecedent to consistency

because the measure available to us is a simplified version of more comprehensive tests of culture. This simple measure, on its own, was not a highly publishable antecedent. However, its utility is adequate for this *post-hoc* extension of our thinking.

Therefore, let's first understand the nature of the measure and then look at the results. The measure works such that individuals assess the appropriateness of each of the seven qualities of culture. Therefore, they are not exclusive. A person could assess all attributes as equally true (although that would be suspicious). The results of this measure are compelling. First, all of the managerial techniques of our study correlated strongly and positively to *two* of these seven cultural types, *team orientation* and *people orientation* (range, $r = .38$ to $.71$). They also revealed a moderate correlation to *attention to detail* and *innovation* (range, $r = .18$ to $.49$). They bore no relationship to *outcome orientation*, *aggressiveness*, or *stability*. All of these findings make sense. Let's just look the top two types. *Team orientation* was described as "the degree to which work activities are organized around teams rather than individuals." And *people orientation* was described as "the degree to which management decisions take into consideration the effect of outcomes on people within the organization." Taken together, these provide a quick affirmation that the techniques by management occur concurrently with a culture ostensibly focused on people and their concerns rather than foremost about corporate goals. Moreover, the managerial technique that most strongly correlated to both culture types was managerial supportiveness. The weakest correlation was supervisor effectiveness. This hierarchy is consistent with what we previously saw. Namely, the top-level variables tend to more strongly relate to the appropriate culture types and conditions that one would expect for elaboration to occur (Table 8).

Table 8: Correlations between Antecedents and Culture Types		
	People-Oriented Culture	Team-Oriented Culture
Participation	.54	.52
Communication	.63	.56
Structured Procedure	.56	.52
Managerial supportiveness	.72	.57
Supervisor Effectiveness	.50	.35

Looking further, these two culture types also reveal a correlation to inconsistency (team orientation, $r = -.35$; people orientation, $r = -.24$). In fact, team orientation amounts to a stronger correlate than any of our hypothesized ones! Employees with greater consistency more highly assessed the two dimensions of culture that describe the most holistic environment of the seven. Additionally, the broader variable of the two, *team orientation*, once again proved more strongly correlated than the lower-level culture, *people orientation*.

Given these findings, it seemed appropriate to test mediation. These two types of culture do, indeed, quite strongly mediate the influence of managerial techniques on the level of consistency. Team orientation fully mediates all but *structural procedure*, which it strongly but only partially mediates. People orientation similarly fully mediates all but *structural procedure* and *managerial supportiveness* (again, only partial mediation). Yet again, the culture type with the greatest mediating effect was the broader of the two constructs, team-orientation (Table 7). This relational finding further supports the notion that our antecedents work best insofar as they engender a broad sense of environment, or culture.

Table 9: Mediation Effects of Culture Types on Antecedents			
	Beta of Original Relationship to Inconsistency	Mediated Beta (People-Oriented Culture)	Mediate Beta (Team-Oriented Culture)
Participation	-.129	-.096	-.061
Communication	-.140	-.099	-.054
Structured Procedure	-.206	-.173	-.123
Managerial supportiveness	-.153	-.130	-.075
Supervisor Effectiveness	-.114	-.072	-.057

These last tests of culture, of all of our *post hoc* tests, most conclusively substantiate our explanation for why this antecedent set works. Our antecedents differentially contribute to or work in conjunction with an overarching culture or environment. These findings give added credence that elaboration occurs due to the amiability of the culture or climate. Admittedly, the culture claim does not evidence the presence of elaboration. But it does push our logic further along by revealing the holistic effects of our antecedents.

Recommendation for Action Regarding Antecedents

The next logical step for psychological research would be to test our causal inferences. The validation may come from different angles. First, inconsistency research should test the relationship between product terms of diverse latent “strength” variables and inconsistency. A direct test may help substantiate that elaboration does actually predict inconsistency. Also, as a test of another step of our causal inferences, future

studies should test our contextual variables (i.e., participation and structured procedure) against specific latent psychological variables. Do they, indeed, summon *elaboration* by simultaneously providing opportunity and motivation, knowledge and vested interest?

In this post-hoc analysis, we have also proposed a new way to evaluate our variables. They may function through a mediating concept of environment. Sensemaking has begun to seek out social schema within the work place. Process models of change consider organizational dynamics as well. Both fields seem as likely candidates to study inconsistency in the workplace from a perspective of culture or environment. In addition, numerous constructs could be summoned to test a direct relationship to inconsistency. We employed a *culture* variable. However, future studies may wish to consider trust, climate, and value congruence. Numerous managerial attributes beyond what we have studied (e.g., fairness, integrity, competence, openness, and benevolence) may prove an interesting inquiry relative to consistency. These relate to what Van Dam et al. (2008) have referred to as the “daily work context (p. 314).”

Eagly espoused that good theory attracts followers (1992). We believe that our reinvestigation of theory from a contemporary perspective should provide that new theoretical foundation which may attract new followers to the field of inconsistency. We have provided multiple new directions for future studies in this regard.

Our study has also provided direct evidence that should be of interest to managers. All of our antecedents have linked actions from management to consistency. If the claim of causality resonates, then the manager can better assess the activities undertaken to help an initiative succeed. But why should consistency matter for success? Because of the importance of this question, our remaining tests attempt to show the

functional role of consistency in mediation and moderation of other effects. However, prior studies have answered this for their respective contexts. Namely, consistency permits the development of strong attitudes. If a manager can improve consistency, members will more likely form these strong attitudes. Strong attitudes resist pressure to slip or revert back during a transformation period. Peers, new counter-attitudinal information, self-doubt, and changes in the environment (e.g., staff changes, environmental mood changes) may threaten a supportive attitude along the way. Since organization change occurs over a period of time, the strength of an attitude would appear to be of relevance. Therefore, ways to *strengthen* an attitude should be a concern as much as the common concern of *changing* an attitude.

Mediation

We hypothesized significant results regarding mediation. Two necessary steps of mediation have previously been unsubstantiated. First, consistency would need to positively correlate to overall attitude. Second, that inconsistency would need to relate to our predictor set of participation, communication etc. The results support both of these steps to develop a test of mediation.

Regarding the first, consistency did, indeed, occur more among those who supported change than among those who resisted it ($r = .25$). This represents a new finding. We substantiated this hypothesis based on the presence of contextual forces present in our study, which have not been present in previous studies. These contextual forces (our antecedents), we felt, would not only promote convergence but also a shift in the bounds in which convergence may occur. Given the small size of this correlation, we wanted to examine this unprecedented effect more closely. We wanted to ensure that the

overall positive correlation did not occur in only certain sections of the continuum, but rather across the entire continuum. To test for this, we discretized openness to change into 2 and then into 3 parcels to determine if any *different* relationship between inconsistency and openness to change emerged in that analysis. No aberrations emerged. Moreover, ANOVA analysis revealed a *continuing* improvement of consistency as attitude became more positive (at the .10 level of confidence which is considerably strong considering the sample size). This additional scrutiny of correlation between consistency and overall attitude permits us to more confidently interpret the mediation test.

Hypotheses 4a-4e predicted that consistency would mediate the relationship between our antecedents set and attitude as a whole. Inconsistency passed the test for all five antecedents. *Participation, communication, structured procedure, and managerial supportiveness, and supervisor effectiveness* appear partially mediated.

These findings require us to ask why consistency would only produce a partial mediation of management activities toward attitudes, and what value this partial mediation serves. The *mediated* part of partial mediation states that certain actions by management trigger consistency which enables a true, or – as Rosenberg added – “irreversible” shift in attitude. This conforms to both inconsistency theory and the ELM. Having found mediation, even partial mediation, provides a needed empirical support for a theory that has evolved without evidence of this step. Therefore, we are pleased with partial mediation. However, how do we address the unmediated influences of our antecedent set? The *unmediated* part of the relationship between management actions and attitude change permits two interrelated interpretations: a.) management techniques have influence beyond what consistency can account for, b.) some attitudes have

changed, but not become any more consistent. The first of these can be viewed positively. Namely, given the many theories explaining how these management techniques function, we may now *add* to that dialogue the evidence found here. That is to say, acts by management can now *also* be explained by how they trigger attitudinal consistency. Our aim was never to usurp credibility from any other model; nor does a test of mediation necessarily do that (Frazier et al., 2004). The second interpretation, specifying that attitudes have changed but have not become any more consistent, is a challenge to the theory of attitude (but not an insurmountable one).

To consider the apparent conundrum that attitudes may have changed but somehow *surpassed* the step of becoming consistent, let's review Rosenberg's initial theories as well as the ELM. Inconsistency theory does, in fact, permit the possibility of mere partial mediation. Rosenberg had demonstrated that an inconsistent attitude is an unstable attitude, a searching or exploratory form of attitude. This means that the attitude could shift between valences over time, be reversible. Therefore, some of the positive, "changed" attitude could still be unstable attitudes, prone to eventually revert, or eventually become more consistent at that location on the continuum. That being said, to rely exclusively upon the idea of instability appears too much of a forced rationalization.

The ELM, from its intended integrative framework, provides a better explanation of partial mediation. The ELM easily makes apparent that we should seek out coexisting effects of, perhaps, importance, certainty, and latitude of rejection, etc. Answers for *just* partial mediation may exist in such an investigation. For instance, some of the shifted but inconsistent attitudes may coexist with a weak degree of certainty and importance.

Partial mediation opens the doors to these further musings. In that regard, we find the results more stimulating than perplexing, an important contribution to attitude research.

Both of these interpretations rationalize partial mediation based on theory. We offer an alternative interpretation, though, that suggests that some of our assumptions regarding mediation are incomplete. First, we must consider that some of the occurrences of consistency may have gone unnoticed by our specific test of mediation. Our test made the assumption that managerial techniques would produce a positive impact on attitude and on consistency. However, is it also not reasonable to think that managerial techniques may have caused consistency but a reactive shift *towards* the negative? Again, this goes beyond our current empirical tests but the plausibility of it has not gone unnoticed by prior researchers. Resistance studies have noticed that some people will formulate strong antagonistic positions if they feel manipulated (O'Reilly, 1991). Moreover, participation could increase the anxiety and defensiveness one has, and provide the proof that "change is not for me." Just because management has employed "proven" procedures does not mean that these procedures have met the threshold of some ingrained emotional needs that Oreg (2003) discusses in his review of emotional forms of resistance.

Another assumption we made is that our variables would produce elaboration which *necessarily* leads to consistency. Elaboration may have occurred, but produced a result we have not yet considered. Could not management techniques also produce the exact opposite effect of consistency? Could techniques *increase* internal conflict and leave it less likely to get resolved? Elaboration may, for some, be the equivalent of removing ignorant bliss. Indeed, not all studies or theories concur with the logic that

“involvement variables,” such as what we have used, lead to consistency and stronger attitude (Thompson and Zanna, 1995). For instance, highly involved respondents may be more attentive to detail, including inconsistent information, and be more conscious of ambiguous qualities (Erber & Fiske, 1984). Therefore involvement and elaboration, by summoning greater conflicting detail, could itself lead to an arrested state of attitude formation (Monson, Keel, Stephens, & Genun, 1982).

This evidence parallels an alternative viewpoint of attitudinal conflict that has occurred within the confines of ambivalence research (but not within inconsistency confines). While most have conceptualized ambivalence as a temporal, troubling state of mind, others have pointed out that ambivalence may represent a wise or intellectually-disposed state of mind. In this alternative view, inconsistency occurs with a clear and comfortable awareness of dialectically opposed information (Williams & Aaker, 2002). In *accepting* duality, the end state of elaboration may be different. The mind recognizes the dialectic, but the mind does not treat it as an unstable dialectic, therefore does not work to eliminate it (Holmes & Rempel, 1989). As Thompson and Zanna have demonstrated with ambivalence, heightening information processing may trigger certain personality *types* to do just the opposite, to develop conflicted attitudes (1995). Thompson and Zanna found that individuals with a personality disposition of “Personal Fear of Invalidity” would experience more ambivalence and more chronic ambivalence than others. This notion has not been raised within inconsistency research, and it was specifically downplayed by Rosenberg. Inconsistency has clearly been treated as a bothersome unnatural state within inconsistency research. As that perception slowly erodes, these studies reveal that the models become more complicated. Looking at our

study, certain more dialectically-tolerant individuals might form attitudes in support of change, but these attitudes may still not rest on consistent evaluations. This would suppress our mediation. In a *post hoc* analysis, our data does hint at the possibility that individuals with Master's degrees and above experienced more inconsistency in response to management techniques (however, inconclusive at a .05 confidence level). Improved *a priori* test design may specifically tease out these conflicting results in future studies.

Recommendations for Action Regarding Mediation

The existence of contradictory theories about the value or role of inconsistency during attitude formation reveals an important threshold of knowledge regarding this construct. We proposed consistency as a logical mediating step toward attitude change, but this may not be the case for given individuals. Moreover, additional research suggests that attitudes may not directly shift in a two step process from an inconsistent form to a consistent one in this change process (Pratt & Barnett, 1997). The possibility of fluctuations, suspensions, and retreats in the consistency process reveals the inherent limitations of our mediation model. Our test only measured consistency at one particular time in the change process. A better test for future studies would be to return to Rosenberg's initial methods of test-retest experiments in search of some of the multiple dynamics suggested by the diverse literature. Or, in non-experimental studies, such as might be more suitable for organizational change issues, longitudinal tests would have a better chance to elucidate the amble of consistency over time. For attitude research, the current findings of mediaiton are novel and important for setting up more complex tests. For organizational behavior research, given the inherent limitation of a single measure of

time, we consider the findings of the current study as an important first step to what might be the realistic future application of consistency theory: process models.

The issue of time concerned Rosenberg in his early tests. Although he did not deeply investigate how much time was necessary to accomplish consistency, time seems a pertinent issue in the context of organizational transformation. Process models of resistance have recognized the importance of time, and have provided conceptual *stages* of an organization's transformation. Each stage states the cognitive processes at play and implies specific actions for management to undertake. Inconsistency as a temporal state may align itself with certain cognitive stages of resistance. As Quinn and Kimberly have stated, as the transformation process evolves, different combinations of values and assumptions may be required (1984). By way of speculation, inconsistency may happen at the initiation stage. "When change is initiated, existing patterns are disrupted and this results in a period of uncertainty and conflict, (Quinn & Kimmberly, 1984, p. 303)." Alternatively, inconsistency might occur throughout *multiple* stages, playing different roles each time. Although Rosenberg identifies inconsistency as temporal, he does not preclude the idea that it can be recurring. Such recurring inconsistency seems plausible during transformation. Inconstancy might align with stages such as Isabella's *anticipation* where information is assembled (1990). Inconsistency could be inserted as an augmentation to process models, as has been done with *cynicism* and *skepticism* (which, by the way, may be interrelated with attitudinal conflict) (Stanley et al., 2005).

In making augmentations to process models, certain care may need to be taken in the nature of the discussion and in the characterization of the function. We have already asserted that inconsistency should force a reframing of the meaning of resistance because

of how it reveals the interplay of support and resistance. Over and above that, one may be able to make the claim that *inconsistency*, as a process step towards acceptance, also has a *positive* role as opposed to a problematic role. This may truly help change the discussion regarding the nature of resistance even further. While we identified *consistency* as an important step of true attitude change, other findings have shown that it could also be true that *inconsistency* may itself serve as a positive, mentally important mediating step to attitude change as well. Several works suggest that ambivalence induces important hyperactive information processing (e.g., Jonas, Diehl, & Bromer, 1997; Maio et al, 1996; Pratt & Barnett, 1997;). Pratt and Barnett conclude that ambivalence may stimulate the unlearning process necessary for change. In conceptual works, ambivalence may provide a beneficial sort of Socratic reasoning (e.g., Williams & Aaker, 2002). Piderit has made a similar theoretical venture regarding organizational change, suggesting that a strategy that intentionally fosters attitudinal conflict may serve as an important step towards the change process (2000). Our work cannot comment on this theory. It is, however, not incongruent without own findings. At different times, both inconsistency and consistency could mediate change. A further exploration of this would better link consistency concepts into process models of organizational change. Moreover, finding *beneficial* properties of inconsistency in the change process would further force us to qualify the standard perception of resistance as a hindrance and an irrational response.

We reference process models largely because of their prominence. However, most are presently somewhat insensitive to individual differences (Isabella, 1990). *Sensemaking* research, however, may prove an even better fit for some of these ideas.

First, like attitude research, sensemaking rests largely on concepts of schema. Second, sensemaking emphasizes the role of ambiguous and incomplete information, which appears amenable to the ideas of consistency. Third, sensemaking, already concurs with the initiative to reconceptualize the nature of resistance. In short, process models have made an important first step of recognizing that change is a dynamic process of shifting context., but sensemaking permits a more individualistic picture. By way of speculation, the following inclusion of inconsistency into sensemaking may occur. A *fluctuating* contextual reality during organizational transformation might yield recurring novelty and impressions into the attitude formation process, which could trigger a recurring process of consistency seeking and sensemaking. We studied perceived management tactics in our tests. However, couldn't such perceptions change over time? Sensemaking adds to this a litany of perceptual time-sensitive variables such as shifts in awareness of a collective viewpoint, as well as shifts in social schema (Axelrod, 1976). Each of these may relate to the ability to formulate well-structured attitudes.

Moderation

Numerous studies have found that attitudes predict behavior better for those with a consistent attitude than for those with an inconsistent attitude. Our study did not. While we do not fully discount that as a possible important null finding, four clear methodological weaknesses have likely suppressed our results, and possibly caused the test to fail: confounding influences on perceived and actual behavior, irregularities among dependent variable raters, statistically inadequate measurement of the behavior, and the abandonment of expectancy-value operationalization. We will address each in turn.

Confounding Influence of Perceptions. Our archival survey had asked managers to assess their subordinates' behavioral support. Unfortunately, this task is fraught with difficulty. Numerous studies of resistance have demonstrated that individuals will feign compliance. Conflicts between values, specifically, may produce feigned or symbolic compliance, lip service, and other unenthusiastic behaviors (Bercovitz & Feldman, 2008; O'Reilly et al., 1991). If employees give a false appearance of support, then their actual support for change (and their actual attitude) will likely be less apparent. This degree of deception makes an independent measure of behavior challenging. One should expect a weakened baseline between attitude and behavior, thus making moderation more difficult to prove. Our baseline was .30. This is on the very low end of tests that have occurred for inconsistency.

Perception and time cause a problem as well. Fishbein and Ajzen (1974), in their important study of methods, categorized our measure of behavior as a "multiple act criteria", meaning it intended to subsume diverse acts across time. This has possible implications for its accuracy. In our case, employers had to assess support based on a slew of behaviors occurring over a period of time. If that support had changed over time, and the supervisor noticed, what would be the correct assessment? If behavior had changed, what is the likelihood that the manager would have noticed? These are time-related problems that affect the accuracy of the assessment. The employee, on the other hand, will likely provide an attitude assessment based on the most recent attitude structure. A disconnect between time frames is not only possible but likely. One should expect an increased error term with such a variable, which would also suppress our attitude-behavior relationship.

Thus far we have spoken of perception. The *actual* relationship between attitude and behavior may also be eroded due to our given context. Mechanisms, responsibility, and a culture of control may impose behavior upon employees, thus creating a weaker relationship between attitude and behavior for any given moment of measurement (Lines, 2005). The more of such constraints and demands on behavior, the weaker the correlation between attitude and behavior (Judge et al., 2001). Although induced behavior may ultimately shift attitudes to be consistent with it (in line with dissonance theory), dissonance restoration may not yet have occurred at the time of our measurement. Therefore, ongoing organizational pressures may impinge on the traditional attitude-behavior relationship (Bercovitz & Feldman, 2008; O'Reilly et al., 1991; Smith-Doerr, 2006), robbing it of sufficient robustness, making moderation effects an impractical endeavor. These issues do not occur in prior studies, which have studied anonymous and free acts, such as voting or intentions of taking action. Testing for moderation may require many more controls than we had in place.

Irregularities among raters. Employing independent raters infuses not only perception challenges, but also irregularities among raters. Namely, each could interpret the true meaning of each point on the Likert scale differently, as well as employ a different variance in which to score their employees. In the current case, each supervisor supervised few employees, therefore, we had 74 raters in action. One of the outcomes of this is the presence of three 4+ standard deviation (sd) outliers in our behavior variable, and five 3+ sd outliers in the data. In the case of the 4+ sd outliers, no supervisor number had been assigned (i.e., missing data). Given the presence of a larger set of such employees without a given supervisor number, no further technique presented itself to

adequately deal with this data without corrupting other data. The remaining outliers appear to have occurred as the extreme measures from supervisors who employed a far wider variance in their internalization of the rating system. At any rate, not even exploratory techniques of dummy variables and exclusion trials improved the data. The data did not lend itself to moderation.

Statistical Inadequacies. The initial survey that produced this data employed a 5-pt Likert survey for both the independent variable (IV) and the dependent variable (DV). Attitude, the IV, consisted of 18 questions; behavior, the DV, consisted of just three. The 18 item test differentiated individuals very well for the attitude. Contrastingly, the DV did not differentiate among individuals well at all. A total of 76 of the total 148 people scored the exact average of 4 for the DV. Among those who scored a 4 on behavior (DV), the attitude scores ranged from 41 to 90 – nearly the entire range of the sample (37 to 90). Someone representing every possible attitude toward change had therefore received a behavioral score of a 4. Although it is highly unlikely that 76 individuals truly embody the meaning of 4, the imprecision of our DV variable has made it appear such. Figure 21 reveals the unusual correlation pattern and the residual pattern, which we postulate has suppressed our baseline and interfered with moderation. This problem with coarseness can be avoided with addition items or additional response options. Frazier and colleagues (2004) recommend a 25-pt Likert, although few have met this standard. In our case, not having control over the development of the survey left us with data that was likely too coarse to capture moderation effects.

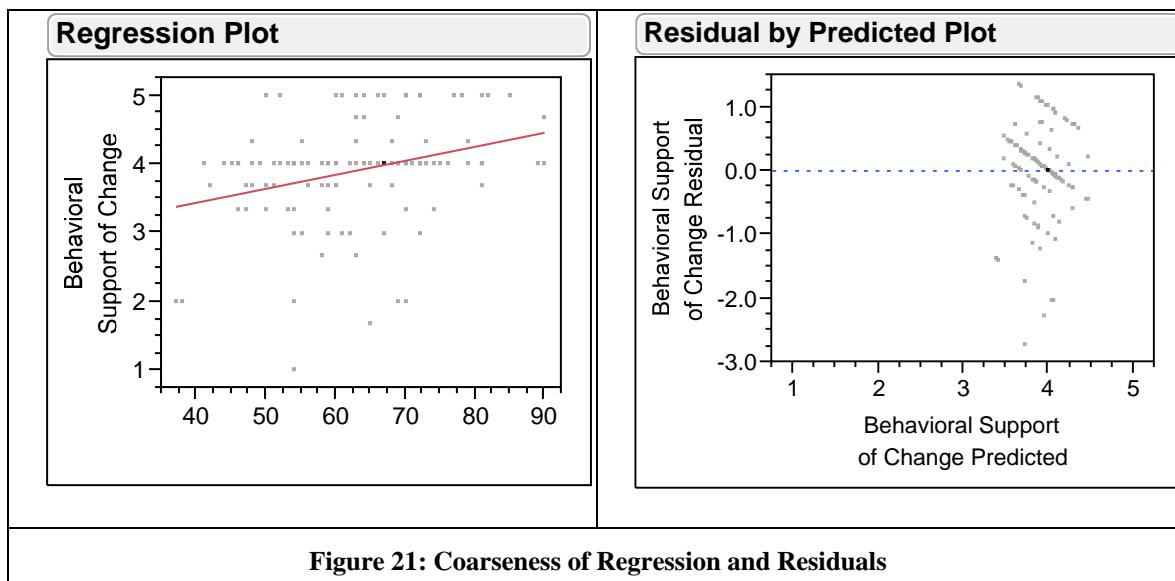


Figure 21: Coarseness of Regression and Residuals

Expectancy-Values. Our measure of inconsistency abandoned Rosenberg's traditional expectance-value measuring device (Fishbein, 1963; Rosenberg, 1956; Scott, 1969). However, in sacrificing the more cognitively reflective approach of Rosenberg, we likely suppressed the likelihood of identifying some inconsistencies. Take for instance two of our questions, the first cognitive, the second, affective: "I look forward to such changes" and "I find the changes pleasing." Alternatively Rosenberg may have asked the cognitive question, "How much does the change initiative affect your job growth potential/image/the company's future." And the affective question may have read, "Determine how much the following words describe the change: threatening/satisfying/comforting/unsettling." In choosing broad evaluations over Rosenberg' itemized evaluations, we may have failed to identify the meaningful separation between affect and cognition. This too may have suppressed moderation.

Our mediation test provided evidence of an important functional role of consistency. However, the null findings for moderation prevent us from stating broad

implications for *behavior* which would interest managers. Therefore, extending the functionality of inconsistency all the way to behavior eludes us. While we have linked the roles of manager to the occurrence of inconsistency, we cannot provide evidence at this time that managers should necessarily attend to this finding so as to better influence *behavior*.

Recommendations for Action Regarding Moderation

Given these limitations of our behavioral variable, moderation was a challenging endeavor. Employing multiple regression almost certainly made the likelihood of success all the more feeble. However, since multiple regression appears to be the unqualified standard today, we have not questioned that approach. Nor do we wish to disentangle the respective contribution of data weakness and test type to explain the failure. Our study, however, puts into perspective the possible contrivances in prior studies. With the exception of Schleicher and colleagues (2004), the empirical support for inconsistency as a moderator rests largely upon tests employing a contrived (ideal) contextual and statistical reality, where environment played an insignificant role and where the standard of median divide tests were employed. Our test, regardless of the source of the problem, puts into perspective the precariousness of previous findings. Prior findings, we feel, require revalidation to correct for both contrivances.

Proposed Areas for Inconsistency Research within Organizational Behavior

We studied broad constructs underlying inconsistency in our study. Oreg, on the other hand, measured ambivalence in search of a specific conflict between attitude

toward the change issue and toward the messengers (2011). Both inconsistency and ambivalence permit innumerable models, allowing one to cater the model to very specific issues. We consider a few enticing examples close to our own experiences.

Congress has initiated change to Department of Defense (DoD) Acquisitions on a continual basis to improve management, to reduce costs, and to ensure accountability (O’Neil, 2011). The seemingly endless reformation fuels accusations of an inherent inability of the US government, as an entity, to successfully transform. The excuses and accusations are numerous (e.g., Denett, 2008; Hutton, 2007; Wyld, 2003). However, we are aware of no study implicating the resistance of employees *en masse*. We would like to offer the countercultural perspective that the lack of attention to employee psychological needs in the face of transformation may partially be to blame for failures of DoD reform. Not to bring extra scrutiny to ourselves as DoD employees, but perhaps we and our colleagues, as middle managers, are to blame, instead of top executives, lawmakers and institutional oddities. Against the backdrop of continual change, one can certainly imagine the potential for *inconsistency* within the reactions of DoD employees. If the individual within DoD has experienced numerous reformations in a career, such an individual with the best of intentions and the greatest of motivations could also display resistance as a form on transformational malaise or cynicism towards change in general.

Considerable research on cynicism, skepticism and trust has occurred within organizational behavior. A comprehensive work by Stanley and colleagues (2005) firmly conceives of cynicism as an attitudinal construct. They define cynicism as doubts about motives (either specific to the initiative or overall), and skepticism as doubting the likelihood of success. Given the track record of Defense Acquisitions, both might appear

to be worthwhile attitudinal studies. While Stanley et al. emphasizes the cognitive aspects of cynicism, the closing remark indicate that the next step of analysis should include a better understanding of how the different *components* of attitude interact during cynicism. The study of attitude towards change within defense acquisitions would appear a strong candidate in which to evaluate cynicism and partial cynicism, that is inconsistency between a cynicism construct and some other evaluation. This demonstrates the flexibility of the construct to address many potential issues.

We also invite readers to consider the application specifically related to active-duty military personnel. The military faces ever increasing pressures to change in response to new enemies, economic cycles, political landscape, and social transformations. We propose that whatever mythology enshrouds the military image in stoicism and steadfast obedience, the human condition still mediates inner life and behavior through attitudes. In fact, we argue that numerous unique forces exist within the military which would make inconsistency and ambivalence more pronounced than elsewhere. The counterbalancing and extreme forces of honor and sacrifice produce what we feel is an ideal environment for attitudinal conflict. These conflicting forces exceed what most civilian counterparts experience as a part of their job. On one hand, the military provides its people excellent professional training, a sense of purpose, and opportunities to excel and mature. On the other hand, in an effort to groom leaders, the military requires regular relocations across the country, remote assignments away from family, and regular deployments. A recent Pew Research survey asked military members to respond to the positive and negative aspect so military life (Taylor et al., 2011). The highest ranked positive aspects were pride, opportunities to mature, gains in

self-confidence, and career skills. The negative related to family strains, and isolation from civilian life. Although the study provided no empirical modeling of the kind that we recommend, one can see the implicit understanding that life in the military is one governed by conflicting evaluations. The reward of honor and dedication to country must always be filtered through the sacrifice and hardship imposed on military members. As such, attitudinal conflict may occur highly within the military. Organizational behavior studies regularly investigate the reasons that active duty members leave the service. The application of inconsistency may come to qualify traditional findings regarding the role of family, age, and motivation.

Broader Significance of Research

The significance of the present research spans broadly across resistance studies as well as inconsistency studies. By calling for follow up actions on each of our tests, we have addressed *new* thresholds of knowledge evoked by our research. Beyond these, we wish to return to the broad implications for reconceptualizing the nature of resistance, an objective which gave rise to our project.

An important implication of these findings is that the occurrence of inconsistent evaluations toward organization change should cause us to reconsider the value and nature of resistance. Resistance generally has been viewed from the perspective of the slighted manager, as a form of direct rejection of a valuable, inherently good objective (Dent & Goldberg, 1999). The traditional viewpoint has purported that resistance describes an irrational and dysfunctional act, a direct unwarranted and intentionally detrimental act of rebellion (Ford et al., 2008). Such an act would be complete in its

negativity, differing – as in older views of attitude – only in extremity. A growing body of research is suggesting resistance is more nuanced. Our own research inserts the idea of inconsistency as a qualifier to that image of complete, spontaneous, and purposeless negativity.

The presence of inconsistent attitudes points out that the individual, in operating within a broad mental attitudinal realm, has failed to resolve all competing values. The many significant constructs that emerge within the field of resistance should make it inherently obvious that an issue such as organizational change could not possibly appear entirely positive or entirely negative to an employee. And yet, it is perhaps because of the disjointed efforts of resistance research that this important starting point for our analysis has been largely missed. The traditional viewpoint fails to consider that resistance might be a *rational* product of evaluation (Jermier, Knights, & Nord, 1994). The presence of inconsistency implies that even the negative construct called resistance might have a purpose (or serve an individual need). If it has a point, it might have a good point. Resistance might be of value to a corporation. As a qualified variation of resistance, inconsistency might point out that managers have failed to represent the proposal correctly, failed to meet the employee's psychological needs, or actually made a proposal that contains bad elements for its stated objective. A qualified variation of resistance takes the initial step of what Ford, Ford, & McNamara describes as a necessary reframing of the manager-employee relationship (2002). Our findings give additional impetus to those calls.

Conclusion

Attitudes have demonstrated an ability to subsume many influences and experiences, and to effectively represent the critical functions that we employ for interacting with the world, namely information processing and learning. These findings constitute one of the largest bodies of knowledge within social psychology. For a science employing disparate emotional and cognitive constructs, the employment of attitudes permits a well-evidenced alternative framework, and perhaps a simpler form, for viewing those influences. Moreover, as this study has demonstrated, this rich literature contains within it more complex constructs that have not yet been employed within resistance studies.

Our tests of one of these constructs, *inconsistency*, have shown that the formation of a consistent attitudinal structure may play a part in the persuasion process. This was our test of mediation. Also, our study has shown which actions management may take in increasing that consistency. This was our test of correlation. Through these tests, this study has accomplished much of what it intended for the field of organizational behavior. We have, first, shown a functional role for a new construct, which may be added to the expanding group of studies emphasizing the micro-perspective. Second, we have elucidated the important steps for managers in this new model.

As an ulterior motive for this study, we have also accomplished important findings for inconsistency research. Our results represent the first substantial evidence of antecedents in this field. In the confirmation of our main hypotheses, we have taken a different approach to the task, and have had to make certain inferences in applying theory. We have, therefore, set the stage for a more comprehensive, belated, and we

believe highly invigorating investigation of the theories upon which we have relied. The failure to find moderation similarly charges the science with additional modeling considerations which may go beyond what inconsistency can currently explain and accomplish on its own. We have thus pushed the model to test its limits.

Lastly, our research comments on the nature of resistance. While numerous approaches now exist to qualify the traditionally pervasive perspective of resistance as inherently negative, ours contributes a specific variable, which, in its very construct, challenges that notion. The attitude structure that may generate resistant-like behaviors has received an important qualification through the discussion of inconsistency. Attitudes contain multiple dimensions, requiring a closer and more appreciative look at the individual. The current study adds voice to the speculation that current methods may be fostering a disadvantageous and anachronistic dialogue regarding the individual. Social psychology has numerous such strength constructs to contribute to this discussion. Resistance studies already recognize the components of affect and cognition, and would appear able to adapt its viewpoint to consider these multidimensional views of attitude. Our study, therefore, takes an important step toward a potentially very fertile expansion of resistance studies through a more robust view of attitude.

Appendix A. Questionnaires

Openness to Change

When answering the following questions, think about the change your organization has undergone over the last three years.

Scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

1. I tend to resist the change
2. I don't like the changes
3. The changes happening in my organization frustrate me.
4. I would suggest these changes for my organization.
5. Most of the changes are irritating.
6. I hesitate to press for such changes
7. I look forward to such changes at my organization.
8. The changes will benefit my organization
9. Most organization members will benefit from the changes.
10. I am inclined to try the changes.
11. I suppose the changes
12. Other people would think that I support the changes.
13. The changes help me perform better at work.
14. The changes tend to stimulate me.
15. The changes help improve unsatisfactory situations at my organization.
16. I do whatever possible to support the changes.
17. I find going through these changes to be pleasing.
18. I benefit from the changes.

Behavior

For the three items below, please assess of the state IT organization.

Scale: 1 = Poor, 2 = marginal, 3 = adequate, 4 = good, 5 = excellent

1. Demonstrates a positive attitude towards ongoing improvement activities.
2. Demonstrates a commitment to our ongoing improvement activities
3. Supports the department in improving our ongoing improvement activities.

Structured Procedure

Think about the improvement activity in your IT department recently and rate the level of agreement with the following statements.

Scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

1. These activities use a structured (defined) process
2. These activities use program management approaches (project charters, a time plans, etc.)
3. These activities use objectives and performance metric to promote improvement progress.
4. These activities use detailed action item follow-up approaches.
5. The employees adhere to the defined procedures for improvement or change.
6. These activities were not implemented using any defined procedure for change.

Participation

1. I have been able to ask questions about the changes at work before they were implemented.
2. I have been able to participate in implementing changes at work.
3. I have had some control over implementing changes at work.
4. I am able to have input into decisions being made about the changes at work.

Communication

1. The information I have received about the changes at work has been timely.
2. The information I have received about the changes at work has been useful
3. I understand what I am supposed to do on my job after these changes are implemented.
4. The information I have received adequately answers my questions about the changes at work.
5. I have received adequate information about the changes at work before they were implemented.

Managerial supportiveness

1. Overall, the management of my IT department has led the implementation of change effectively.

2. Generally, the management of my It department has been able to unit the employees to make these changes a success.
3. Management of my It department has taken steps to provide the resources needs for changes.

Supervisor Effectiveness

1. Overall, the management of my IT department has led the implementation of change effectively.
2. Generally, the management of my It department has been able to unit the employees to make these changes a success.
3. Management of my It department has taken steps to provide the resources needs for changes.

Culture

Assess where your IT department falls on each of the 7 dimensions listed below from “Very low” to “Very high.”

Scale: 1 = very low, 2 = low, 3 = neutral, 4 = high, 5 = very high.

1. *Innovation and Risk taking:* The degree to which employees are encouraged to be innovative and take risks.
2. *Attention to detail:* The degree to which employees are expected to exhibit precision, analysis, and attention to detail.
3. *Outcome orientation:* The degree to which management focused on results or outcomes rather than on techniques and processes used to achieve those outcomes

4. *People orientation:* The degree to which management decisions take into consideration the effect of outcomes on people within the organization.
5. *Team orientation:* The degree to which work activities are organized around teams rather than individuals.
6. *Aggressiveness:* The degree to which people are aggressive and competitive rather than easygoing.
7. *Stability:* The degree to which organizational activities emphasize maintaining the status quo in contrast to change.

Appendix B. Tests of Significance

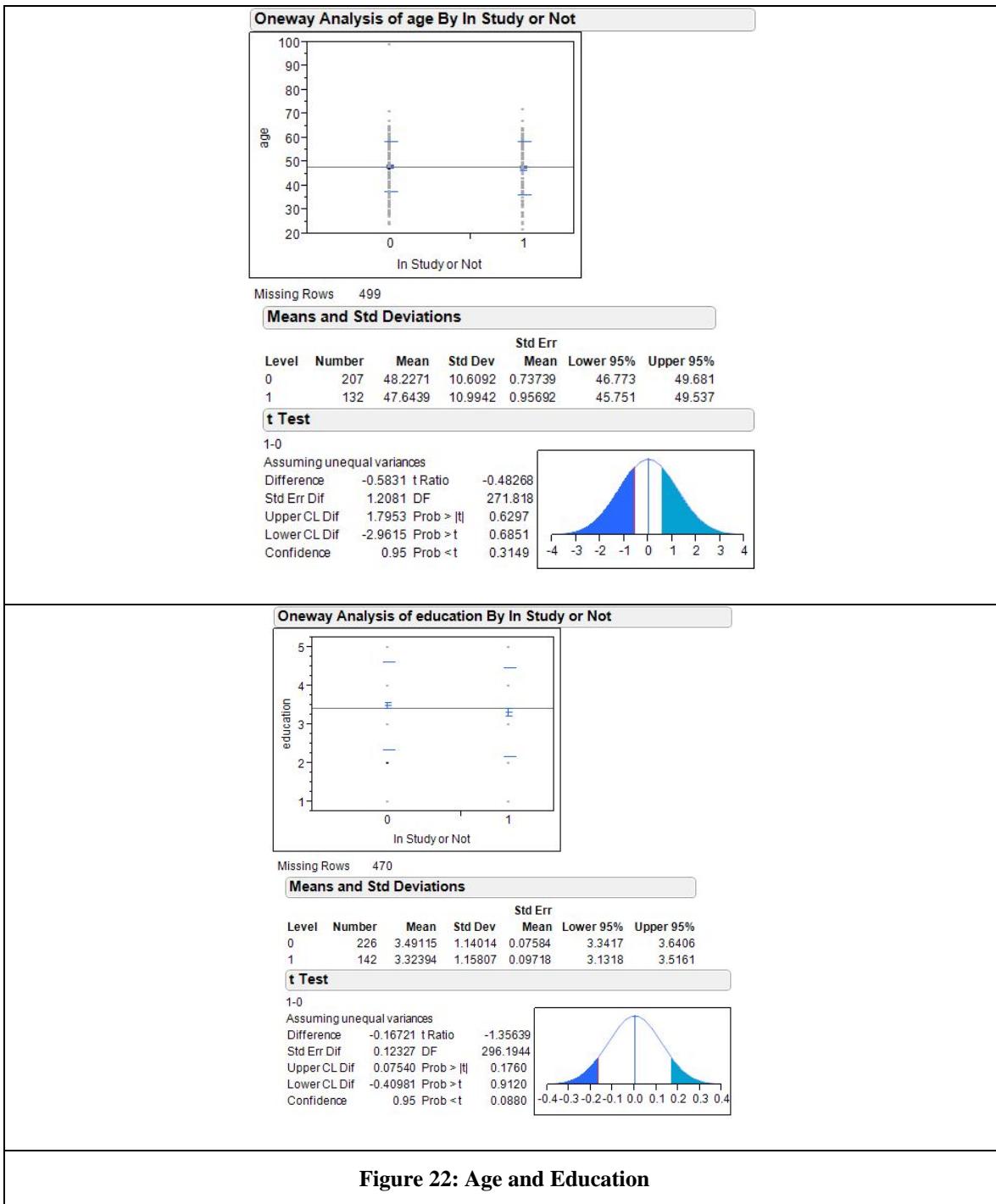


Figure 22: Age and Education

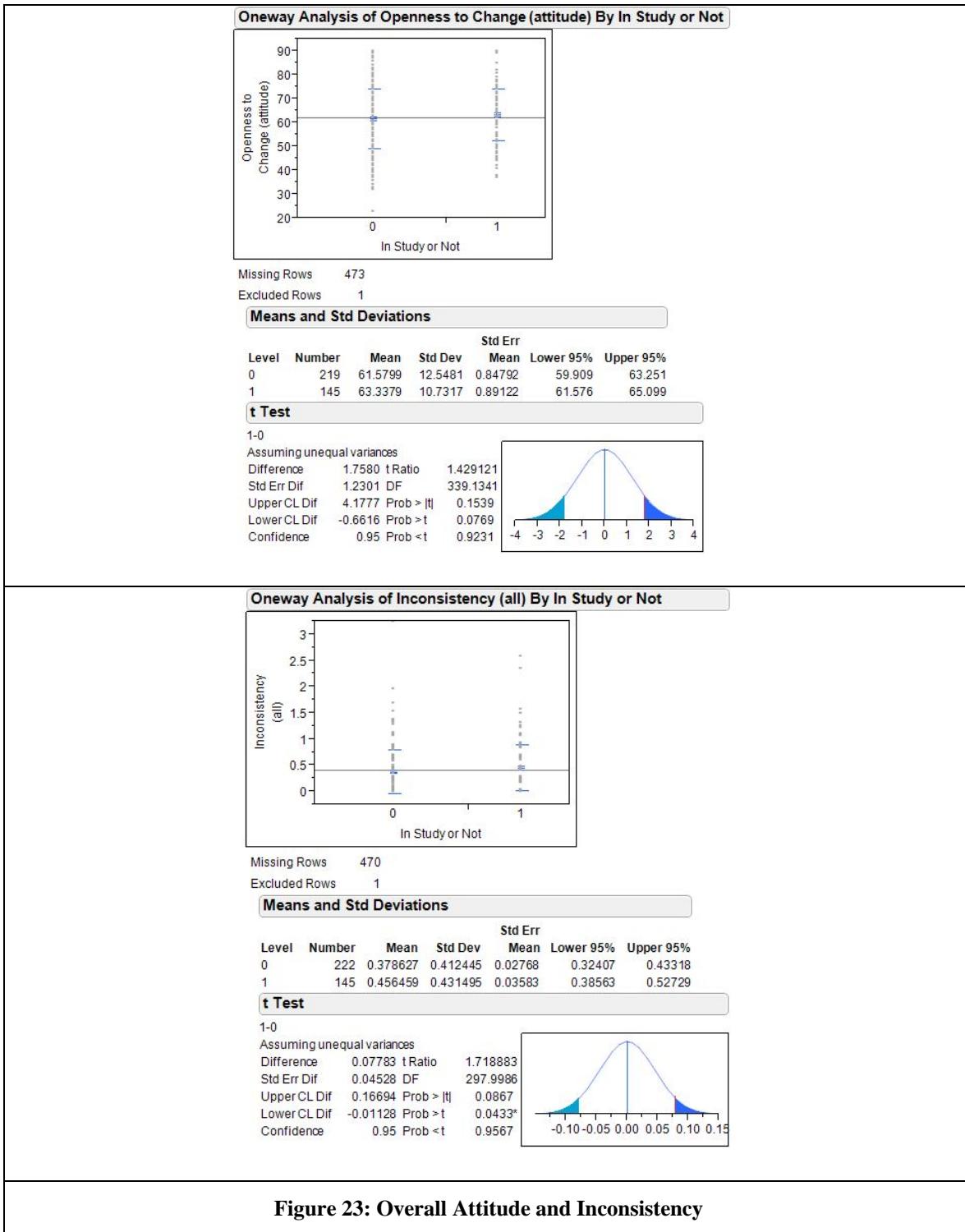
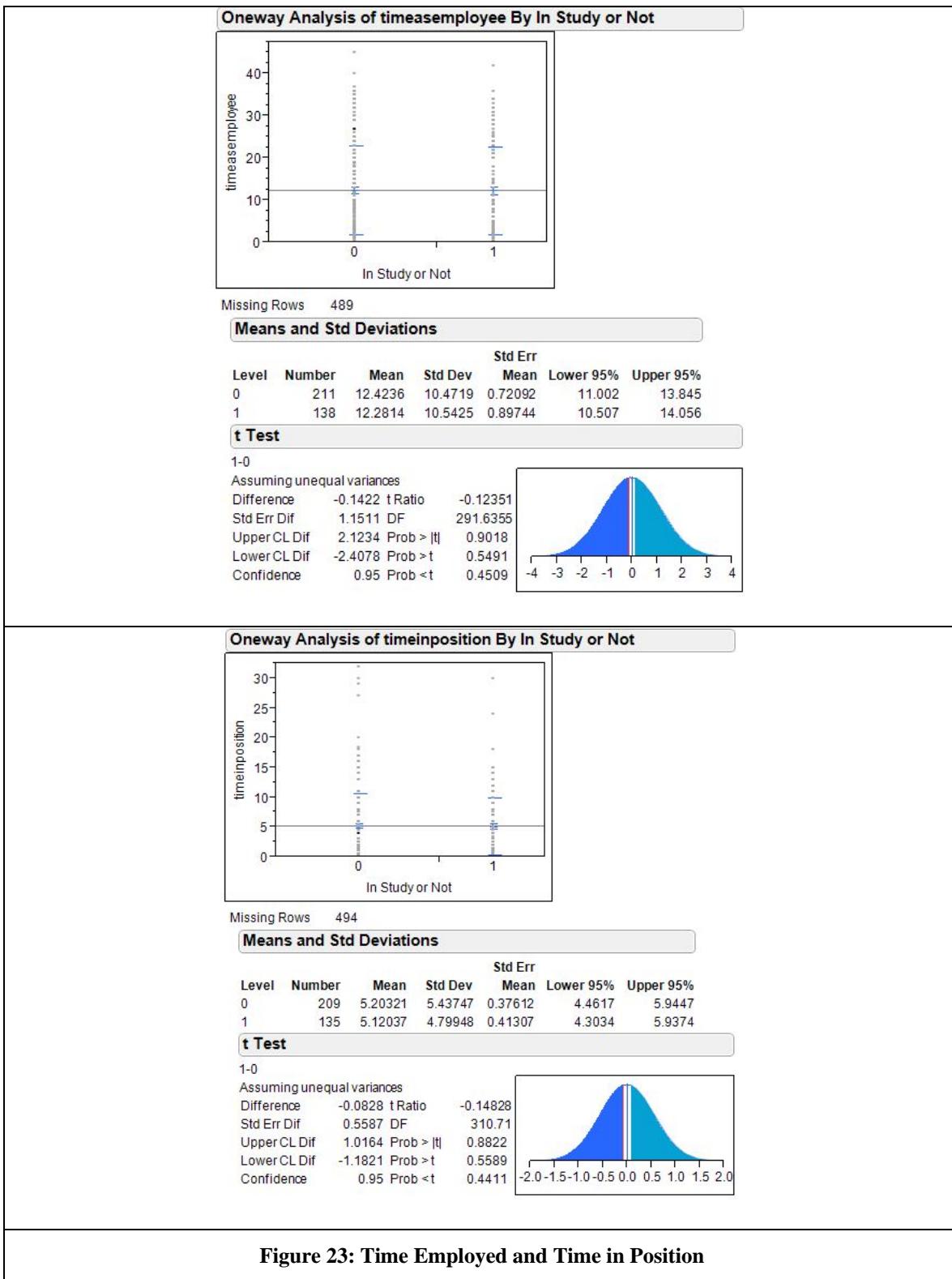
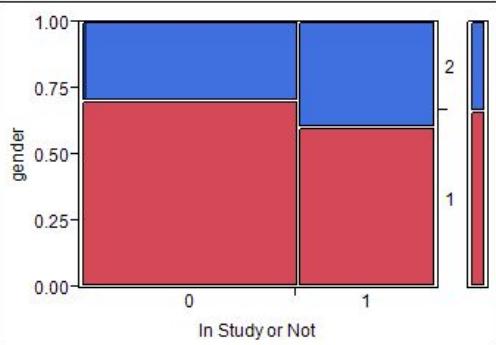


Figure 23: Overall Attitude and Inconsistency



Contingency Analysis of gender By In Study or Not

Mosaic Plot



Contingency Table

		gender		
		1	2	
In Study or Not	Count	155	66	221
	Total %	43.06	18.33	61.39
	Col %	64.85	54.55	
	Row %	70.14	29.86	
	1	84	55	139
		23.33	15.28	38.61
		35.15	45.45	
		60.43	39.57	
		239	121	360
		66.39	33.61	

Tests

N	DF	-LogLike	RSquare (U)
360	1	1.7862150	0.0078

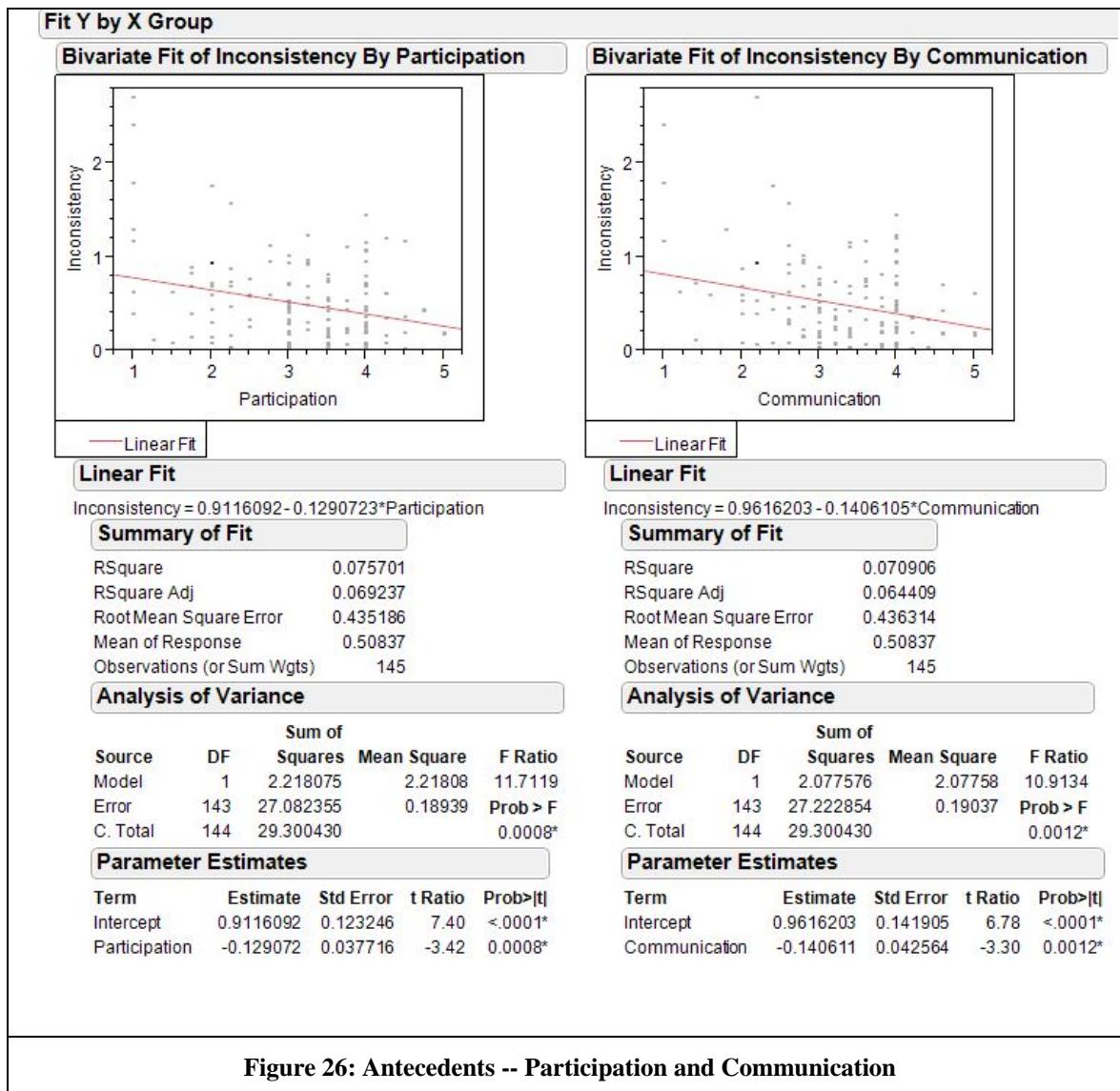
Test	ChiSquare	Prob>ChiSq
Likelihood Ratio	3.572	0.0587
Pearson	3.601	0.0577

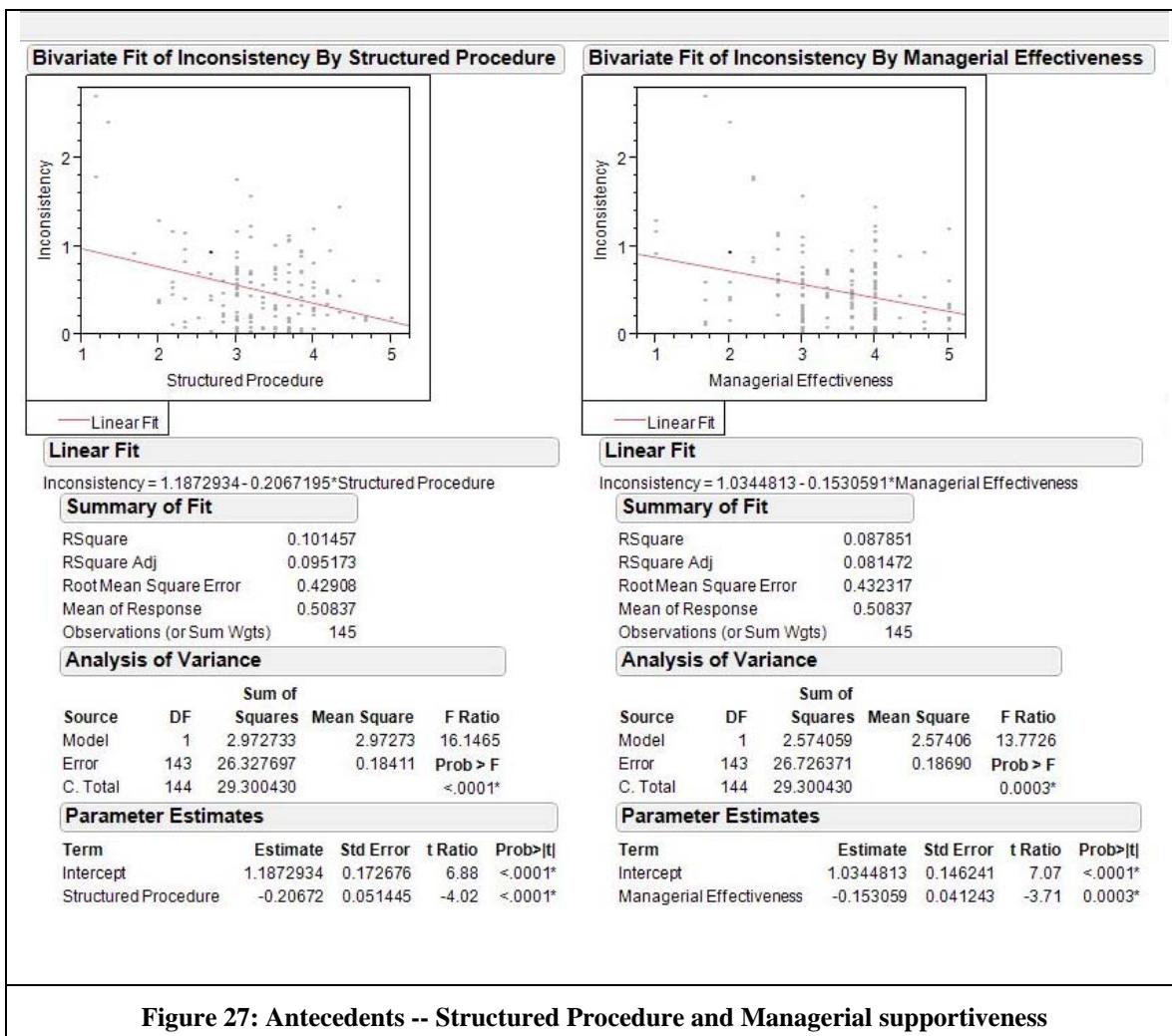
Fisher's

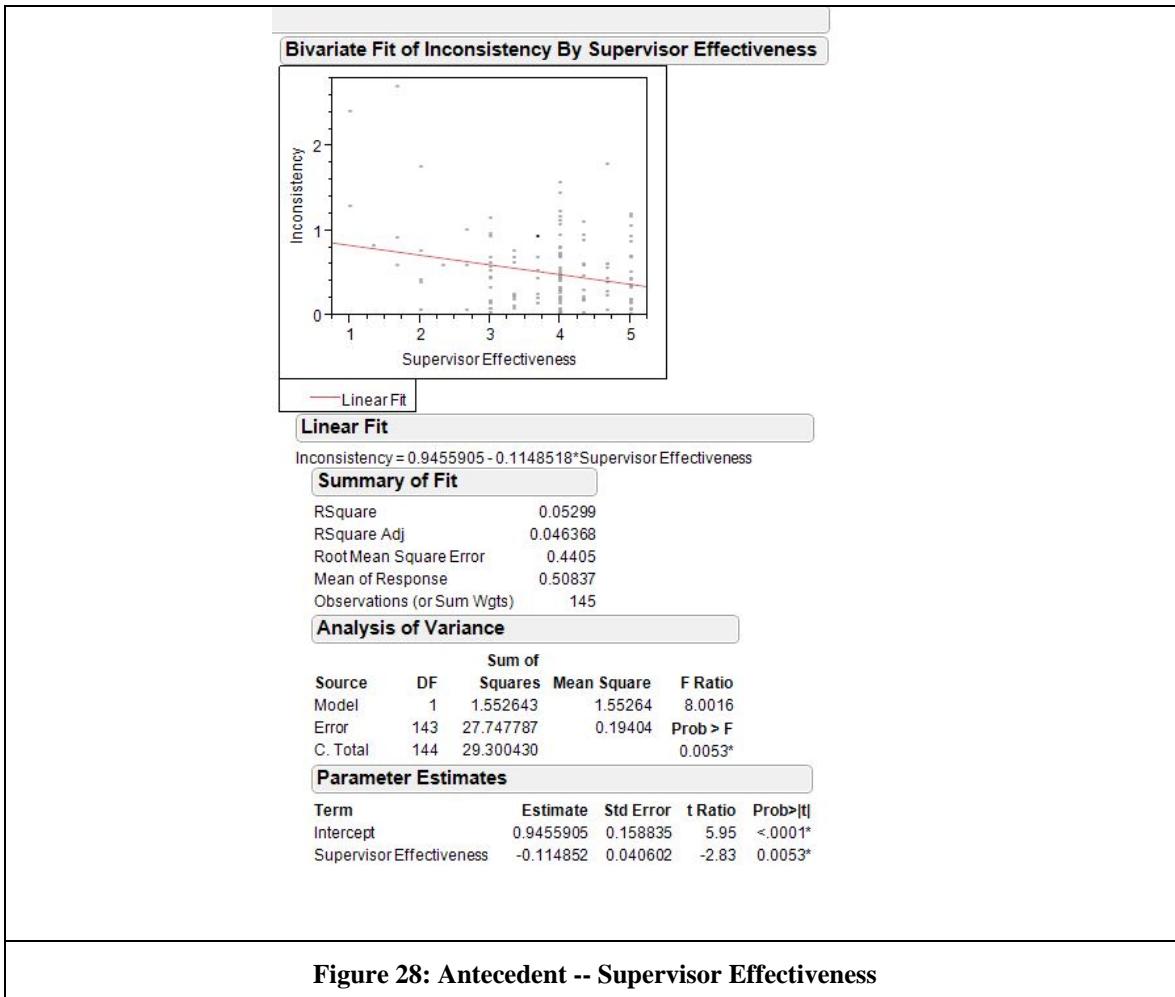
Exact Test	Prob	Alternative Hypothesis
Left	0.9776	Prob(gender=2) is greater for In Study or Not=0 than 1
Right	0.0377*	Prob(gender=2) is greater for In Study or Not=1 than 0
2-Tail	0.0668	Prob(gender=2) is different across In Study or Not

Figure 24: Gender

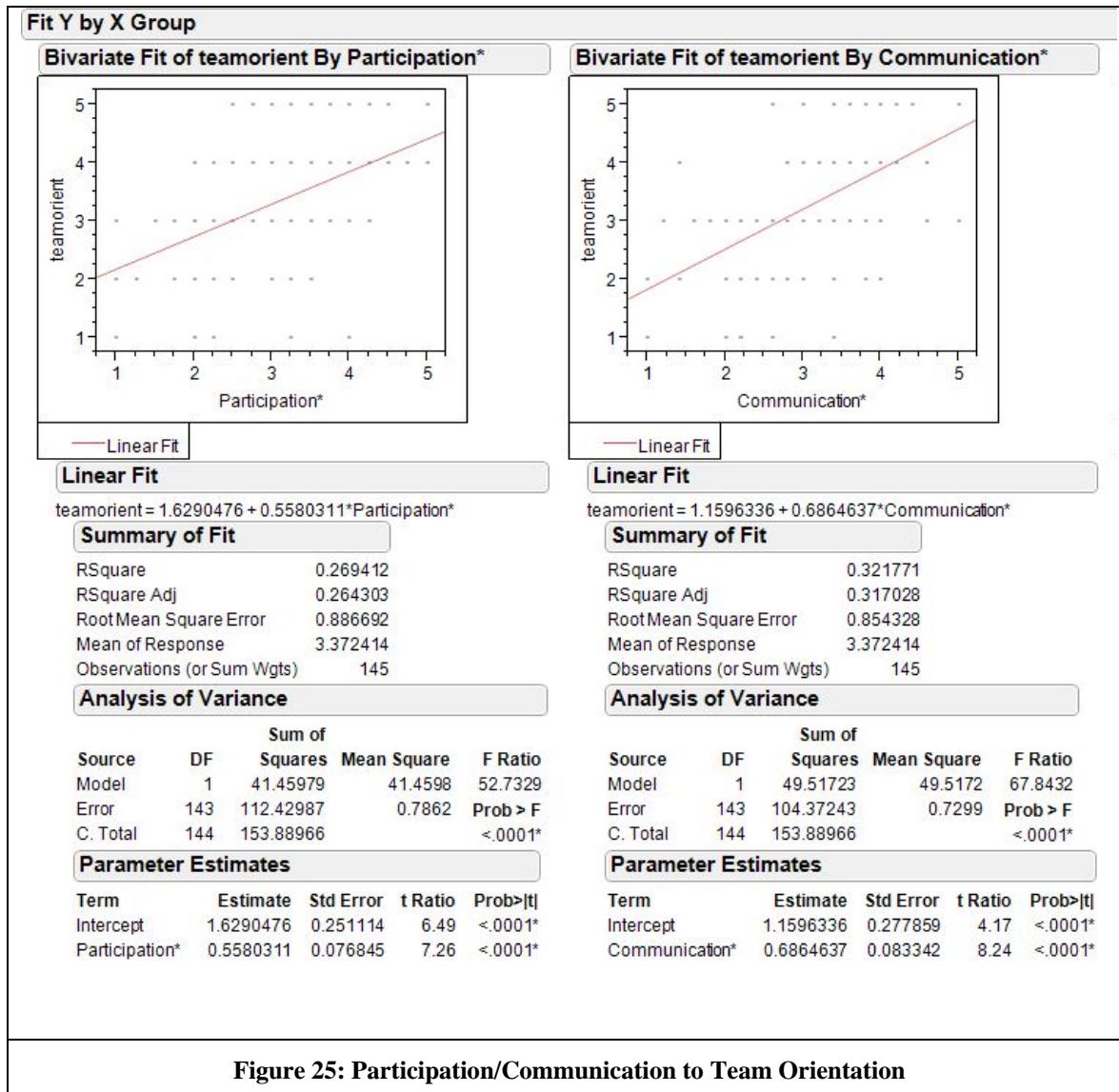
Appendix C. Tests of Antecedents

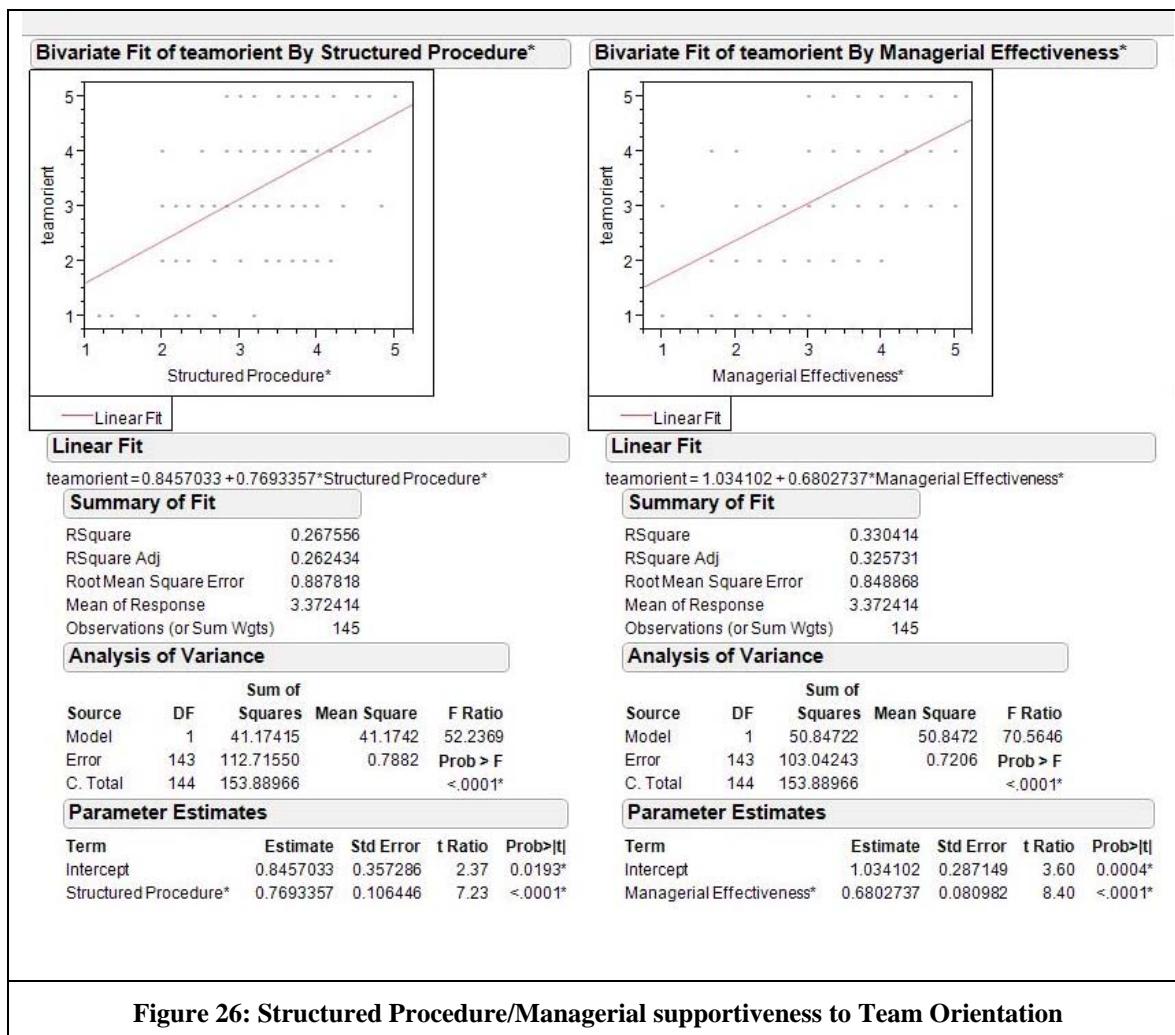


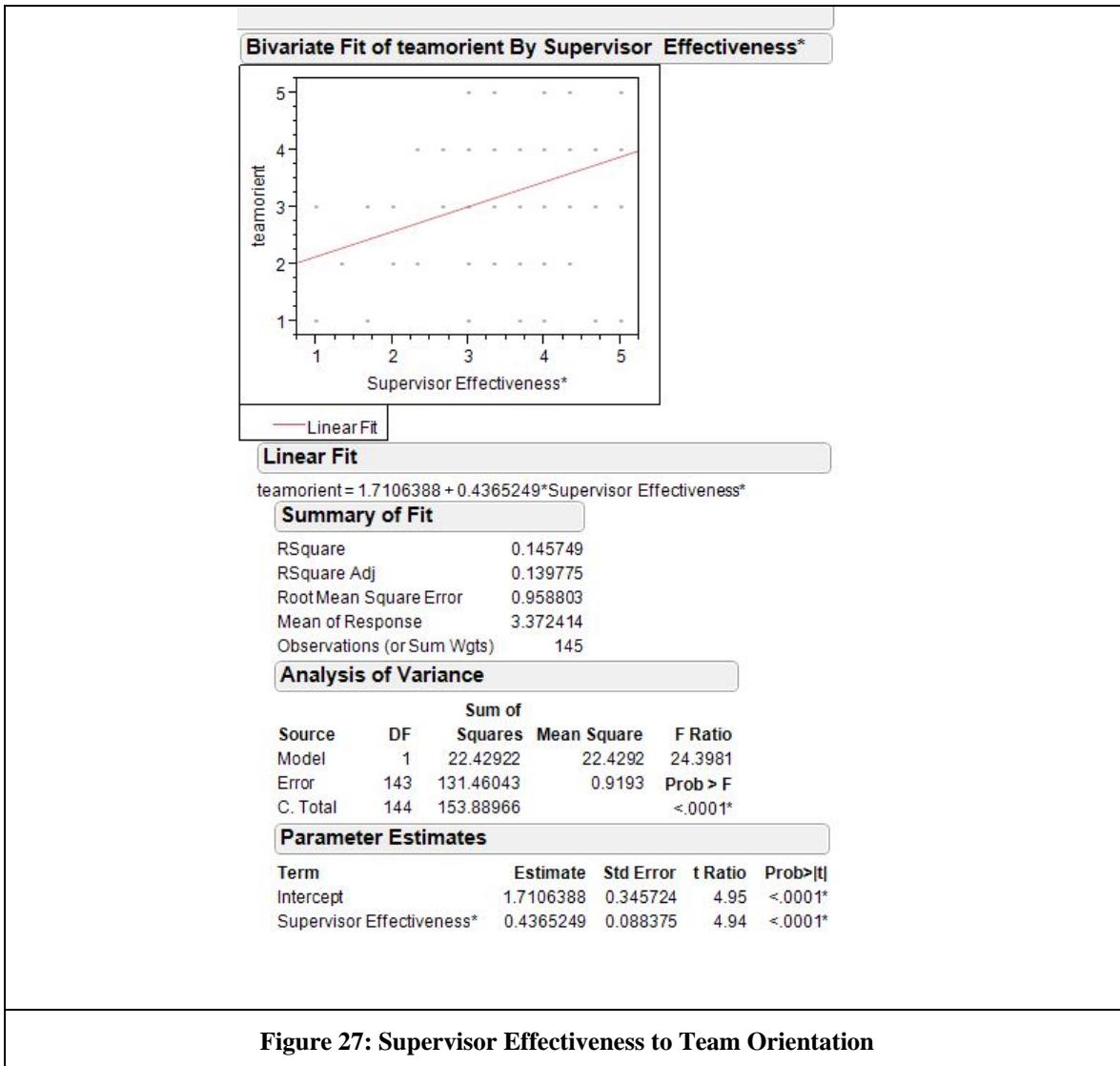


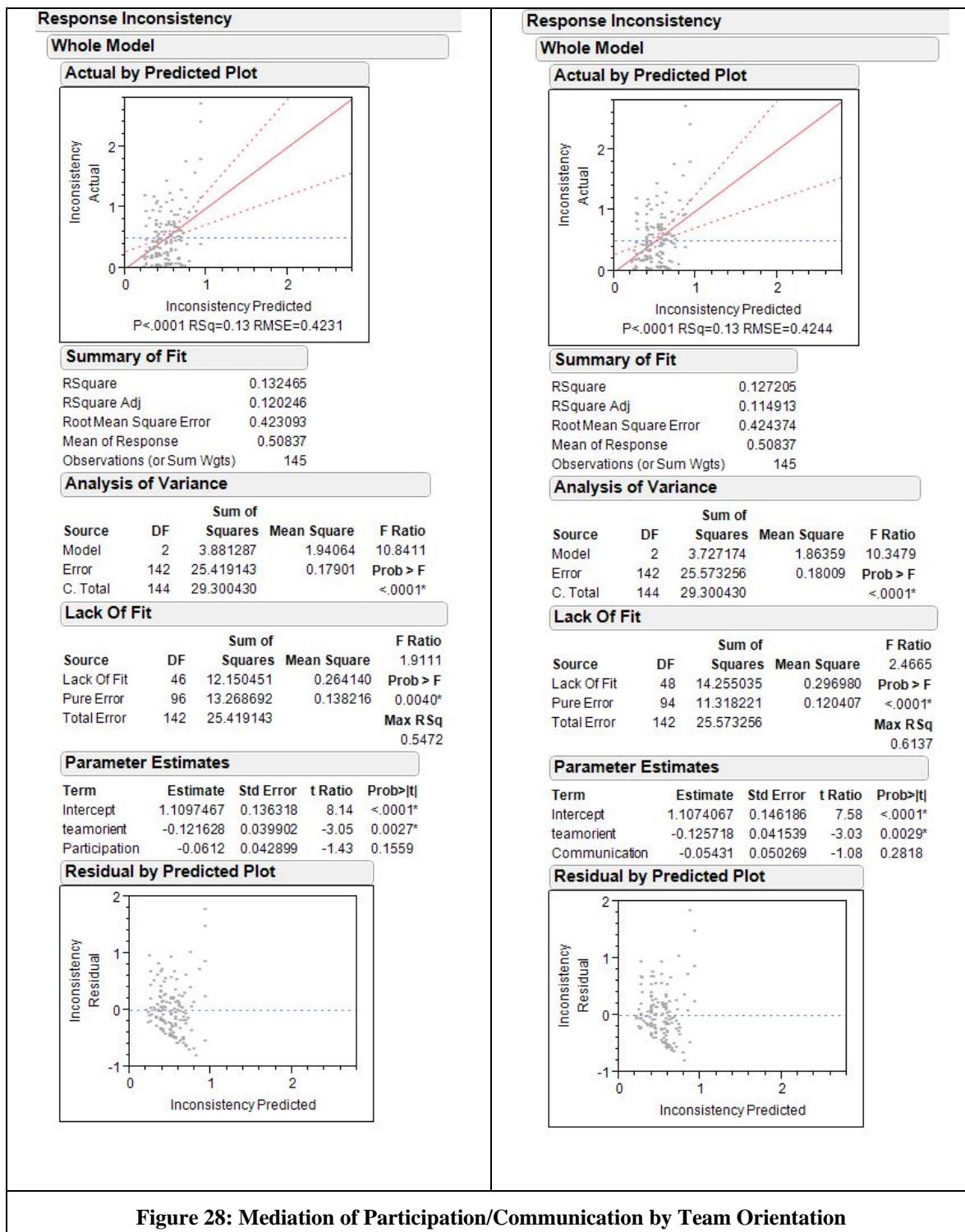


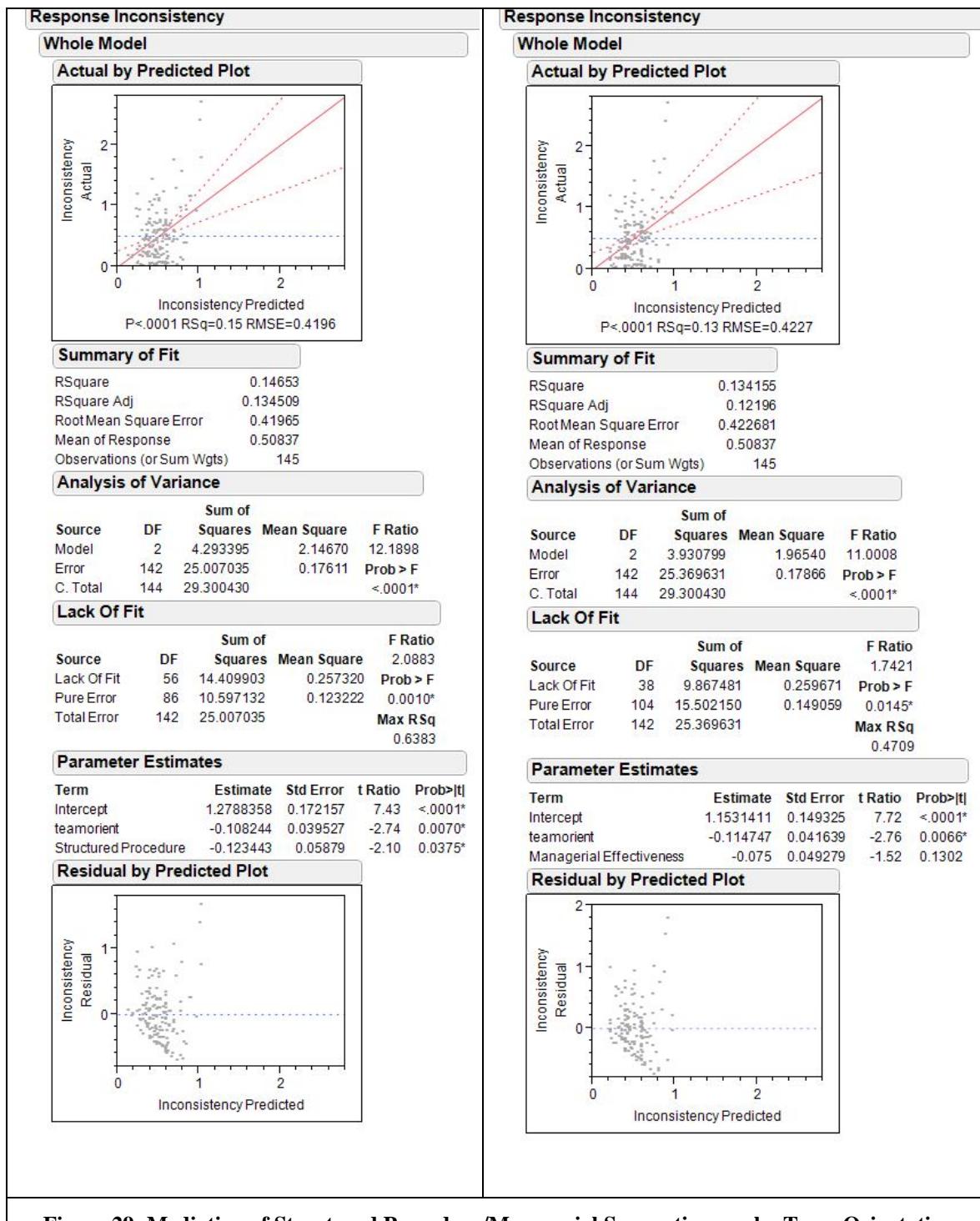
Appendix D. Post hoc Analysis: Cultural Mediation of Predictors











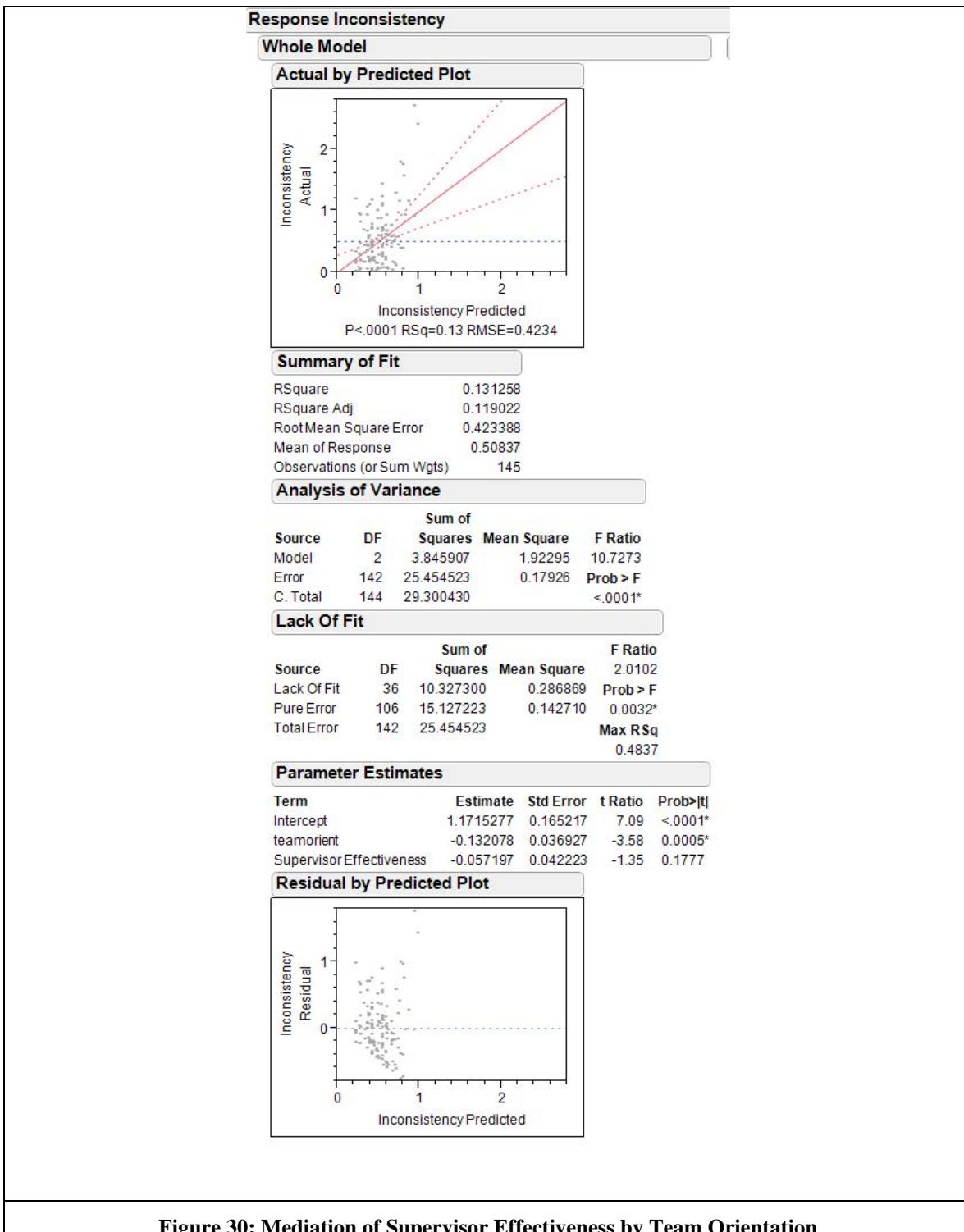


Figure 30: Mediation of Supervisor Effectiveness by Team Orientation

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14. ABSTRACT Studies have largely portrayed individual resistance as a pervasive, irrational and problematic response to organizational change initiatives. The current study confronts this interpretation with a model of attitudinal inconsistency that provides a more holistic perspective of the individual during times of change. Inconsistency reveals the degree to which the mental evaluations of a change initiative may conflict and produce weak attitudinal foundations to govern behavior. Measuring affective-cognitive consistency, the tests in this study demonstrate that employees may form inconsistent attitudes towards a change initiative. As the first of two novels contribution to the literature, inconsistency relates negatively to the perceived quality of management transition techniques such as participation, communication, structured procedure, managerial supportiveness, and supervisor supportiveness. In a second test, consistency also seems to serve a role in the process of attitudinal change. Consistency partially mediates all five of the above predictors of openness to change. Post hoc analysis provides further evidence of the importance of a supportive culture in reducing inconsistency. Taken together, these results should cause some pause in the criticism of resistance. The mental processes behind perceived resistant attitudes and behaviors may display consequential dimensions beyond uniform negativity.					
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